TOGETHER

A CASEBOOK OF JOINT PRACTICES IN PRIMARY CARE

The National Joint Practice Commissi

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of Joint Practices
in Primary Care

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Preface

Early in its work, the National Joint Practice Commission found that little was known about joint practice. Indeed, joint practice had not even been defined. Nurse practitioners were cautiously exploring the boundaries of their expanding roles and physicians were testing team practice concepts. Of the relationships between nurses, physicians, and patients in these new modes of practice, only fragmentary accounts existed.

In order to study and make recommendations about nurse-physician relationships—one of the purposes for which the National Joint Practice Commission was established—the Commissioners found it necessary in 1973 to begin to accumulate a body of case material on joint practice.

We chose primary care joint practices for the initial study because the experience in this milieu, at that time, seemed to us more abundant than that in secondary and tertiary care settings. State joint practice committees, state medical and nurses' associations, educators, and many other interested nurses and physicians were invited to recommend specific joint practices in primary care for inclusion in a casebook. The response was immediate: Over 250 practices were identified. These were screened for examples of family practice, pediatrics, obstetrics, psychiatry, and other specialities geographically distributed across the nation in urban, suburban, and rural settings.

Project staff interviewed nearly 100 joint practice nurse-physician teams by telephone and submitted their findings to the Commission Advisory Committee, who selected the practices included here for interviewing by professional writers. Their narratives underwent technical review by the Committee and preliminary editing. The general editor, Berton Rouché, then brought them all together in their present format.

The Commissioners regard these cases as "slices of life." Nothing was done to make them conform to a preconceived pattern. No *a priori* definition of joint practice was applied other than that the same patients were served by the nurse-physician teams. Each practice presents the principals' concept of jointness and of primary care. Nor were the Commission's value judgments allowed to obtrude. Readers are invited to form their own opinions about the practices illustrated here.

The nurses and physicians who consented to have their practices, their personal and professional views, and often their personal lives exposed to the readers of this book have done so under their own names. Patients' names were changed to protect their privacy.

It is noteworthy that there is no evidence that enhanced economic status was either contemplated as a goal of joint practice or even generally achieved. Noteworthy, too, is evidence of the growth of a new pa-

tient relationship with both nurses and physicians, showing the ready acceptance of these by all three.

The whole-hearted collaboration of the case principals and of the persons who provided referrals made this book possible. They joined in the enterprise with complete candor and concern that the presentations should be accurate.

In the execution of the project, four Commissioners of the National Joint Practice Commission served as the Advisory Committee. I was honored to serve as their chairperson. The others are Nancy Melvin, R.N., Otto C. Page, M.D., and Shirley A. Smoyak, R.N., Ph.D. The National Joint Practice Commission staff served as the project staff: William B. Schaffrath, Ph.D., was project director; Gregory J. Nigosian was research associate; and Beatrice D. Kenar was administrative assistant. Professional interviewing, writing, and editing was done under contract by EPIC (Educational Publications and Innovative Communications). EPIC's director, Elaine F. Katz, rendered services far beyond those stipulated in the contract.

The Robert Wood Johnson Foundation provided generous funds with which to produce the casebook. The Foundation's vice president for grants management, Terrance Keenan, and senior program consultant, Ann A. Bliss, gave invaluable counsel to our staff throughout the project.

The Commissioners hope that readers of these cases will be heartened by what they learn and will be encouraged to adopt new modes of practice *together.*

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Introduction

The benefits to be derived in terms of patient care from an expanded role for the nurse practitioner have yet to be fully realized. Because of the number of variables involved, it is inevitable—and desirable—that the concept be defined in the crucible of experience.

The case histories in this volume delineate instances in which the need was perceived and responded to on the local level through a relationship built on mutual trust and respect between nurse and physician.

Basic responsibility for the medical care of a patient must at all times rest with a physician, and the physician can never legally or ethically evade that responsibility. Yet, recognizing that, there are real and significant benefits that accrue to patient, nurse, and physician when the nurse and physician utilize to the fullest their talents and knowledge in an effective working relationship. The case histories here presented demonstrate how that can be achieved.

Max H. Parrott, M.D., President
American Medical Association, 1976

For a number of years, critics of the health care system have pointed to the absence of a comprehensive range of health care services and to the physical and monetary barriers that gravely hamper accessibility to the existing services. In the past few years, nurses, the largest professional group within the health occupations, have begun to play a more significant role in the development of manpower resources to meet the public's needs. As greater emphasis has been placed on total health care aimed at the physical, social, and mental well-being of the individual, the role of the nurse has been carefully scrutinized and the scope of nursing practice has been expanded. In addition to employment in institutions concerned with inpatient and ambulatory care, we now see the nurse practicing as a member of an interdisciplinary health care team or in solo practice—either self-employed or as a member of a group of nurse practitioners.

As evidenced in the 24 case studies presented in this volume, the emergence of the nurse practitioner as a primary nursing care provider has added a new dimension to the traditional doctor-nurse relationship. This casebook provides concrete evidence of the benefits to be derived from physician-nurse collaboration. It is apparent from these studies

that, when a physician and a nurse enter into joint practice, a broader spectrum of health services is made available to the consumer.

Utilizing the team approach to health care delivery, the physician and the nurse are able to offer health care services to more individuals and to treat those individuals more effectively and efficiently. It is my hope that the accounts in this casebook will serve to stimulate physicians and nurses across the country to enter into joint practice to better serve the health needs of the American public.

Rosamond C. Gabrielson, President
American Nurses' Association, 1976

SUITE 511

The eight-story Doctors Office Building, towering high above the treetops in a quiet neighorhood in Cambridge, Massachusetts, is occupied—with one notable exception—by physicians on the staff of the adjoining 300-bed Mt. Auburn Hospital. The exception is the occupants of Suite 511. The sign on the door of Suite 511 reads: R. K. Funkhouser, M.D./ J. E. Steel, R.N. Doctor Funkhouser—Robert K. Funkhouser—is a Harvard-trained internist, gerontologist, and specialist in community medicine. Jean E. Steel is an adult nurse practitioner and an expert in community nursing. The two have pooled their unique but highly complementary talents to form a nurse-physician joint practice.

Doctor Funkhouser, a rumpled giant of a man (6 feet, 6 inches tall) is approaching 50. He was born in St. Louis, Missouri, where his grandfather, a lawyer-doctor, was a famous coroner, and his father was a surgeon. At the age of eight, he saw his first post-mortem. At 22, he graduated from Harvard Medical School. His precosity then ended. He was 33 before he began to practice medicine. "I was young," he says. "I had a leisurely sense of time."

Those "leisurely" 11 years shaped the aging young physician. He spent three years as an intern in Cleveland, switching from surgery to medicine. He served aboard a troop transport as the ship's doctor. He completed a residency in internal medicine and a fellowship in cardiology. Then, raised an atheist, he began worrying about how the dying were treated, became interested in the theology of Paul Tillich, and accepted a two-year fellowship at Harvard Divinity School. There, he studied the background of the Bible and existential philosophy. He also worked at Boston's famous Peter Bent Brigham Hospital, trying to understand how it felt to be dying.

When he finally hung out his shingle in 1959, Doctor Funkhouser embarked on his present course of working only half-time in private practice. With a cavalier disregard for money, he used the rest of his time in such causes as running neighborhood health centers in poverty neighborhoods, worrying about "the forgotten old people" in nursing homes, running a geriatric clinic in a Harvard teaching hospital, and using his expertise to train young doctors in planning for their elderly patients' care after discharge from a hospital.

"You can be helping patients with medical things until the cows come home," he says, "but if you don't make practical arrangements for food and shelter and nursing care for these down and out old people, then you're not approaching their needs at the right level."

Jean Steel, a slim energetic woman of 39, with short-cut greying hair, is the daughter of a Cleveland doctor and nurse. After a brief career as a medical secretary, she ended up at Cornell University—New York Hospital School of Nursing, where she earned a bachelor of science degree. That set her direction.

"While in school, I worked in East Harlem with the Visiting Nurse Association and I knew from the first that I wanted to do community nursing," says Ms. Steel. "I liked working with black people and other minorities and, to my surprise, they liked me. Marvelous old people would grin from ear to ear when they'd open their doors and see it was me."

Ms. Steel's parents had long had a place on Cape Cod and she spent many pleasant summers there, so it was not unnatural for her to choose to work in Boston. She spent eight years with the Boston Visiting Nurse Association (VNA)—two years as a staff nurse, and the rest as a VNA supervisor in poor neighborhoods, such as Roxbury and the South End. But that wasn't quite what she wanted. She went back to school, to Boston University, and earned a master of science degree in community health nursing. She went to work again, and served for three years as executive director of the VNA in Framingham, a bedroom community 20 miles west of Boston.

Her next job was nursing director of the Harvard Community Health Plan, a new health maintenance organization (HMO). The plan was considering training its own nurse practitioners, so Ms. Steel felt compelled "to learn what it was all about" by enrolling in a new course for nurses at Peter Bent Brigham Hospital. Dr. Funkhouser was one of the course instructors.

"The course was supposed to be part-time," Ms. Steel says, "except that it wasn't. Classes then met for only a day and a half a week, but there was a tremendous amount of studying to do and it was impossible to do all that and work at my job, too." Her problem was resolved, however, when disagreement regarding who should hire and fire nurses resulted in Ms. Steel's resignation. She then had plenty of time to finish the four-month course.

"We had lectures from 8:00 a.m. to 5:00 p.m.," she says. "They covered various systems. When we studied the heart, we'd hear from a physiologist and a cardiologist; we'd study nursing responsibilities and the pharmacology of cardiac care. I had learned most of this before. The course was actually a review of things I'd studied in college, but added

the skills of history taking and physical examination."

Neverthless, it changed her life. Her acquaintanceship with Doctor Funkhouser ripened into friendship. "I was especially impressed with his concern for very old people," she says. And he was impressed with her.

When she received her certification as an adult nurse practitioner in January, 1974, Funkhouser offered her a job at a salary of $17,500 a year —somewhat less than she had been earning before. But she accepted. In actuality, her income was determined by the time she spent in practice, which turned out to be less than full time, and only amounted to $12,000 for the first year. Says Ms. Steel about the reduced income that first year: "I did not feel it fair to charge Rob for time spent in building my case-load, or for time spent when no patients were present."

Ms. Steel says that, originally, Doctor Funkhouser had offered to let her keep her own fees after paying her share of the expenses. "But I was nervous about fee-for-service," she says. "I didn't know whether I'd be any good at it or not. I never had had to sell my nursing skill."

Things improved, however, when Doctor Funkhouser, preparing to move into his present new and larger office, sent his patients a letter saying: "Joining me in the office will be Ms. Jean Steel, R.N. . . . Because of our collegial teamwork, we will be more available for patient care. Ms. Steel will be providing any nursing care needed and, in addition, will be available for physical examinations, treatment of minor illness and chronic disease, as well as teaching and counsel. I regularly confer with her regarding patient care and management. I hope you will ask for her, particularly when I am not available. We are a 'first' in Cambridge in a team of medicine and nursing private practitioners." They had both, at last, found themselves.

Patients coming to Suite 511 in the Doctors Building see a good-sized waiting room, staffed by a receptionist occupied with typing medical records. The five elegant wooden chairs are mostly antiques, inherited by Doctor Funkhouser from his father; the worn Oriental rug came from the New York office of a music publisher, who was Doctor Funkhouser's father-in-law. On the wall, a chart of Boston Harbor reflects Doctor Funkhouser's interest in sailing. He owns a 33-foot Bristol auxiliary sloop, which he anchors near the Boston airport.

"Most of our patients are upper middle class," Doctor Funkhouser says. "Some are professors and students who don't want to go to a university health service. We also encourage Medicare patients, and they make up 15 to 20 percent. For a long time, I was the only doctor in Cambridge who was giving birth control advice—it used to be against the state law—and this made up about a third of my practice. Now we can do this openly, and it's a good part of what Jean is doing. We also develop plans of care for elderly people and Jean does an awful lot of

home visits."

At first, when new patients came in the receptionist would offer them the services of either the physician or the nurse practitioner and too many to suit both the doctor and the nurse practitioner would select the physician. Nowadays, the receptionist is instructed to explain Ms. Steel's qualifications and try to get her to do the initial workup. "Our patients are a sophisticated bunch," she says. "It's not unusual for them to ask the receptionist for my curriculum vitae. They want to see how I was trained."

By the end of 1974, Ms. Steel was attracting her own patients, but some of Doctor Funkhouser's old ones stubbornly resisted seeing her. "A lot of patients who first see Jean will stick with her after the initial exam," he says. "But those who have been my patients for years still expect to see me. One woman said yesterday: 'When I chose you, I chose *you*.' She was very hurt that somebody else might take her blood pressure and supervise her hypertension. If people feel that strongly about it, *I'll* take their blood pressure."

Both practitioners have their own examining rooms. Ms. Steel furnished her own. The instrument table is made of two old, repainted chests with a new formica top laid over them. The examining table is an ancient one, scrounged from a friend and repainted in the front where it shows. On the wall, in Old English lettering, is a credo that Ms. Steel composed:

> O Lord. Give me the wisdom to accept necessary counsel, the power and knowledge to make sound decisions, the creative freedom to initiate and accept change, and the skill and means to provide the finest nursing care to my fellow man in a safe, humane, and loving manner. Above all, guide me in gentle ways to be sensitive to others, their beliefs, their needs, their opinions, and their ultimate dreams.

Ms. Steel says that many of her patients react favorably to this statement. "They say, 'Gee, that really tells me a lot about you!'," declares Ms. Steel. "That's good. I want them to know that these are my standards."

The letterhead on which bills are sent out carries the names of both practitioners. Their business card also carries both names. The prescription form lists only Doctor Funkhouser's name, however. They both charge $15 for a standard 15 minute office visit. Ms. Steel charges $30 for an initial, comprehensive exam, for which Dr. Funkhouser's charge is $55.

"I've learned a very important thing from this practice," Doctor Funkhouser says. "At first I felt myself responsible for every act the nurse performed. But now I realize that the nurse is an independent practitioner, licensed by the Board of Registration, and she's practicing nursing. What she's doing is collecting data and that's always been a nurse's work."

Ms. Steel is in the office Monday through Friday, all day. Doctor Funkhouser, however, is away three afternoons a week. That means the

nurse practitioner is used to being on her own. "After a workup," Doctor Funkhouser says, "Jean makes a list of things she wants to ask me and once or twice a week, between patients, we'll sit down and go over it. She'll run through a history and physical and ask about the things that she needs help with. I leave this entirely to her judgment. She's a highly experienced person with good clinical judgment."

A visitor gets a quick demonstration of how the associates in Suite 511 work together. Ms. Steel examines a "sty" that a young woman in jeans and sandals says has been bothering her for several weeks. The woman, a recent law graduate, had lanced it with a needle and some pus came out but the lid still looks swollen. Ms. Steel excuses herself and comes back: "I just looked in a textbook," she tells the young woman, "and there's nothing to do for a sty except the hot compresses that you've been putting on them. I want Doctor Funkhouser to look at it. Maybe hydrocortisone will help."

Doctor Funkhouser takes a quick look and says: "What we have to tell is the difference here between a sty and a chalazion, a fat-filled cyst." He rolls the eyelid back. "This is a chalazion; it's like a wen. It has to be removed by an ophthalmologist." Ms. Steel gives the woman the name of an eye specialist in the building and bills her only $10, "because I took very little history and I'm sensitive to the fact that I had to refer her to someone else."

To the visitor, Ms. Steel notes that the young woman had said initially that "she was all for paramedical people, so that meant she was prepared to have me admit my limitations. I don't feel bad about telling someone I don't know all about stys."

If Doctor Funkhouser is absent from the office, Ms. Steel can usually reach him through the paging beeper he wears constantly on his belt. But if something comes up in the office and she can't reach him, she can get backup help from several doctors in the building. She gives an example:

"An elderly lady in her 70's came in to have her toenails cut (she couldn't do that for herself). She was in need of a checkup, and I found an enormous lump on the breast. It was the ugliest cancer I've ever seen; it was draining and indurated. Rob was not available, so I got the hospital chief of surgery on the phone and told him what I saw. He came right over and admitted her to the hospital immediately. She had surgery and is doing fine today."

Sometimes Ms. Steel will ask a patient to wait in the office until Doctor Funkhouser can come there. She remembers: "A man complaining of rectal bleeding came in and gave a history like hemorrhoids. The exam showed it was more like venereal warts but I wasn't sure. I asked the patient to wait for half an hour until Doctor Funkhouser could get there. I told the patient I wasn't sure of my diagnosis. Most patients are

reassured by such honesty. Rob came in and I told him, in front of the patient, what I had found. It turned out the guy had a hemorrhoid, but it was so badly excoriated that it looked like venereal wart."

Commenting on the backup that she got in this case, Ms. Steel says: "This is one of the main reasons that I'm in a joint practice." Doctor Funkhouser comments: "The unique service that a doctor gives is understanding the complexity of a disease."

Ms. Steel has her own paging beeper and responds immediately by phone to any patients who call her answering service after hours. After assessing a complaint, she may direct the patient to the hospital emergency room. "Sometimes this doesn't work out too well," she says. "I had a woman go in who was threatening suicide. I talked to the intern on the phone and he was surprised that a nurse was seeing a patient as sick as this. Next day, the patient called back, again threatening suicide. She had been sent home. I talked to the resident and she was finally admitted."

Ms. Steel's hospital privileges are a problem. She has none at all at Cambridge Hospital, where Doctor Funkhouser is director of community medicine and where he sees about half his patients. Nor have her privileges been formalized at Mt. Auburn Hospital. "However," she says, "I just walk in and write on the record when I want to write on the record. Sometimes a resident will give me a hard time, then I get Rob to talk to him."

Occasionally Ms. Steel savors victory. She faced a real challenge with some nursing colleagues when a disoriented elderly woman she had admitted to Mt. Auburn after a fall "started raising all kinds of hell and getting all the nurses mad. The nurses became interested in my approach to the patient when the woman said she wanted a drink, and I bought her a gallon of rosé wine, and she calmed down. Then they wanted to know her background and what I saw as her problems. I explained that the woman couldn't see too well and suggested that when they went into her room that they should walk over and put a hand on her and tell her who they were. This worked fine. The nurses got to like the old lady and still ask me about her."

Ms. Steel has strong notions about what service she is not qualified to render. "For example, if a patient calls and says he has a bad back, I'll save him from paying two doctors and refer him immediately to an orthopedic surgeon," she says. "I don't know anything about bad backs.

"Another specific complaint that Rob and I have agreed I can't handle solo is when someone has a stomach ache. I may get the patient in to do the initial workup, but I'll either call Rob in or refer the patient to somebody else. I have good relationships with several internists in the building. When I refer a case I request a report. It amuses me that only about four of the men to whom I have sent referrals have replied with a note

to me. The others insist on writing Rob."

The Funkhouser-Steel practice is guided by protocols. They are contained in a one-inch thick plastic looseleaf notebook with index tabs. The protocols, gleaned by Doctor Funkhouser from various hospitals, offer guidelines for managing such ailments as congestive heart failure, diabetes, hypertension, and strep throat.

"I don't like these protocols, but I haven't done anything about them," Ms. Steel says. "They were written by doctors and don't reflect nursing concerns. For example, a patient may be required to be on a low salt diet. A nurse would ask, does the patient eat the foods that a doctor thinks he eats? A patient who is told not to eat ham or pork because they are too salty might instead eat chitlings, which are even saltier. Or a patient told to avoid excessive sugar consumption might drink a kosher wine like Mogen David, on the mistaken assumption that kosher wines don't have sugar. Caring for people isn't as cut and dried as this book of protocols implies."

Despite the newness of her profession, Ms. Steel has had no trouble getting and keeping malpractice insurance. Doctor Funkhouser, checking on his own insurance, was told by his insurance agent that "we have had unusually good loss experience with doctors who work with nurse practitioners." Ms. Steel buys her own insurance, at a modest price, through the Massachusetts Nurses Association.

Ms. Steel believes it is important that she have peer review. On the first Monday of every month, she meets at her office at 5:00 p.m. with two veteran nurses. One of them teaches geriatric nursing at Boston University and the other is skilled in psychiatry and community health. She pays them $10 each for the hour to go over notes she has accumulated during the previous four weeks. "I keep a list of the patients I've had difficulty with—because I didn't know enough about their disease, because I had trouble communicating, or simply because I didn't like them. I also list interesting cases.

"I think I insulted Rob at first, because he thought *he* was my peer. So I invited him to join us for a session, and he was reassured that these nurses weren't doing something that he should be doing. I don't ask them how to treat a strep throat. That's what I ask him. That's medicine.

"I just felt that I needed someone to counsel me and remind me about doing a good job of nursing. These women give me their experience as nurses. They also give me comfort. In a solo arrangement like this, you're isolated from your own peers."

It may be that Ms. Steel's deep identification with nursing (she is running for president-elect of the Massachusetts Nurses Association) is responsible for such feelings. That identification is responsible for her answer when a patient asks, "Why don't you become a doctor?" Ms.

Steel invariably replies, "I don't want to be a doctor. I want to be a nurse."

Ms. Steel is very definitely a nurse when she leaves her office to visit homebound patients. A visitor accompanies her to a monastery where an 85-year-old monk has been confined to his room after suffering a stroke two years earlier. Ms. Steel was instrumental in getting the 20 monks living there to agree to keep the old man in the monastery and care for him there instead of sending him away to a nursing home.

"I went there three times for meetings with all the monks to talk about their feelings about aging and to get them to change their attitudes," she says. "I also helped them find a man to care for the patient and I spent a lot of time training him."

Today, the old monk greets her cheerfully. He has been listening to a recording of a book. Ms. Steel had suggested he send away for the Talking Book, after realizing he could no longer read easily. (She also got the monks to buy him a small TV set so he could watch the news, but, to their consternation, he quickly became addicted to daytime soap operas.)

Although the old monk is cheerful, Ms. Steel sees something amiss. The patient's paralyzed right arm is in a plastic splint and the hand is twisted into a claw. Rotating the wrist, she says: "This is really tightening up. What you need is a new and wider strap on the splint so this won't happen. Can I borrow this for a few days and get you a new strap?" Pleased, the old monk nods his assent.

Outside the patient's hearing, Ms. Steel talks to one of the monks who cares for him. She wants to know if the old man is still so demanding. "You sometimes have to say no to him," she advises.

Her next visit is to a beautiful grey-haired woman in her 90's who has been exceptionally active until now—walking many blocks every day and keeping busy with several hobbies. "Recently, she fell—and she fell apart," Ms. Steel says. "She went home and to bed from the emergency room and caught pneumonia as a result. I went over and walked her every day to keep her from having to go to a nursing home. Then I found a retired woman to stay with her. I want her to be able to get out of the house, but first she has to learn how to get up and down stairs again."

At the woman's apartment, Ms. Steel gets the woman to put aside her aluminum walker and, using a cane, practice walking down from the second floor. When the woman wearies, the nurse has her rest by sitting down on the stairs. Then she drills the woman's caretaker in the same exercise, and shows her how to stand below the woman to break her fall if necessary. "I'll be back to see you day after tomorrow," she says And she means it.

Ms. Steel also visits patients at nursing homes. She has courtesy privileges at the 75-bed Prospect Street Nursing Home, but at others she has to go as a "visitor" during visiting hours. She is enthusiastically received in the rooming houses that shelter the aged. "I went to see one patient in a Somerville rooming house, and before I left I had seven patients," she recalls with pleasure. This is impressive, since Medicare does not cover these patients' bills for neither Ms. Steel nor Doctor Funkhouser qualify as a home-care agency.

Many of Ms. Steel's referrals come from the Cambridge-Somerville Home Care Corporation, a government-funded project for providing meals, homemakers, and other services to the aged. "They call and say they've found someone very sick who doesn't have a physician," she says. "These are people who haven't seen a doctor in 20 years. In one visit, I can identify ten major problems. As a former visiting nurse, I know the importance of seeing someone in their own environment as a means of assessing needs. Then I get their lab tests started and make an appointment for them to see Rob. They like my taking the time I do when I take care of them."

The time Ms. Steel takes with older patients is indeed impressive. A visitor watches her spend nearly an hour in an office visit with a woman in her 80's who is suffering from congestive heart failure and arthritis of the hip. The waiting room is empty for a moment, so both Doctor Funkhouser and Ms. Steel chat there with the woman, apparently aimlessly, about her enthusiasms for gardening. "But this isn't just chit-chat," Ms. Steel later tells a visitor. "It's important for us to know that she's out in the garden, that she's active."

Besides old folks, Ms. Steel is also attracting young folks. "I suppose you could call some of them women libbers," she says. "They hate doctors, they hate medicine, and they particularly hate men doctors. They are setting up do-it-yourself clinics in the community and, I warn them, are getting second class care. But, after one of the women in the group first came to see me, a lot of them became my patients."

One of Ms. Steel's most important referral sources is Doctor Funkhouser. She is in her office talking to a visitor when the doctor brings a youngish man to the door. "This is Mr. Y.," he says in introduction. "He came in with epigastric pain, and there's a lot of hepatitis going around at his job. He also has mild hypertension. I've ordered some tests. I won't be in next week, so will you take it from here?"

Ms. Steel nods her assent. "Now the patient has a relationship with both of us," she says later. "Rob ordered an SMA 12 and I'll explain the results to the patient. I'll also get a hypertensive workup going, an IVP, ECG, and a chest x-ray."

Because of the many demands on his time, Doctor Funkhouser is de-

lighted to be associated wih Ms. Steel. "Jean frees me from those endless birth control exams," he says. "What's really challenging to me is to identify when a person is in trouble and to be able to help with personal problems. The girls coming in for birth control advice are embarrassed to ask me questions that they freely ask Jean, because she's a woman. This is an illustration of why our joint practice is better than either of us working alone."

While noting that Ms. Steel often saves him "from taking initial histories with an awful lot of repetitious questions," Doctor Funkhouser is not convinced that this is an ideal situation. "One fly in the ointment is that I'm not as close to the patient. If you're the authority who sits in the back office and answers questions, you're bound to be a little remote."

Ms. Steel says, however, that sometimes she does better than Doctor Funkhouser in relating to certain patients. "We have some male homosexuals coming in," she says, "and at first I feared they wouldn't accept me—but they have, better than Rob. I also do well with the teenagers—they know I would never be judgmental . . . and I have done well supporting a couple of young women who've had really bad rape experiences."

Ms. Steel is especially good in detecting psychological problems and helping her patients with them. A visitor notes that, when taking a case history, she'll say (to a college professor), "Tell me about your emotional health," or (to an Italian gardener), "How are your nerves?," or (to a young student), "How are you getting along with others; are you making friends?"

"I tune in whenever I hear bizarre, vague complaints, like stomach cramps when there's nothing there," she says. "The vaguer a person gets, the more persistent I get. I'll come right out and ask: 'Do you find yourself depressed lately?' It's better to come right out with it."

For a while, Ms. Steel was seeing a 40-year-old woman every two weeks to help her through a persistent depression. In addition, she was counseling an older man in whom alcoholism became evident after his wife died. "I also do diet counseling, but I don't like it," Ms. Steel says. "I want to do it as a whole thing and not just as a diet problem."

Doctor Funkhouser believes that "if this practice ever starts going full tilt, we'll be seeing three times as many patients." One reason he was slow in building up the practice, he says, is that his wife became seriously ill. "I spent a lot of time with my wife and as little as I could at the office," he says. "Jean was keeping things together."

Because of their relationship, Ms. Steel has taken on unusual responsibilities. A visitor sees her opening all the mail and extracting the checks from the envelopes. "I have taken on the financial management," she says, "because there was nobody else to do these chores." She grins,

ruefully, when the visitor catches her changing the linen on Doctor Funkhouser's examining table. "I do this for Rob because it wouldn't get done if I didn't do it."

Ms. Steel finds enormous pleasure in every aspect of her work. Should she ever feel momentarily discouraged she only has to consult a sheaf of "fan mail" from her patients. Her favorite letter is from a woman she found to be suffering from breast cancer. The patient wrote:

> When I agreed to have you examine me, I honestly thought I was making an effort to live according to my beliefs by supporting women professionals. Instead, I'm afraid I managed to provide you with a panoply of problems, and apologize for your having to expend so much of your time on me. . . . I am sincerely grateful for your thoughtfulness and will always owe you my gratitude for identifying those annoyances before their (sic) becoming major problems.
>
> I also have a confession to make. The other day I told you that it didn't make much difference to me if the medical people whom I would have contact with treated me like a board—as long as they were competent in medical analysis. You disagreed, saying that understanding and sensitivity to problems were vital. Seeing as I've never written such a note as this before, I'd say that the evidence for your case is sufficient to win on the merits.
>
> Formerly, I always figured with respect to medical care that I got what I paid for, and the shorter the duration of my exposure to anyone, the better. Now I must admit that the understanding and empathy which you bring to your profession made this whole hassle easier for me, and I also wish such competence and sensitivity were available to all—especially those without means to receive medical attention.
>
> You were, however, wrong on one point. You said it took time for trust to develop between people—particularly in a doctor-patient relationship. Not so, for I only met you once. Again, my sincere thanks for all your help.
>
> J.S.

NEW SHOW AT THE STORK CLUB

The sign on the double doors says: "Stork Club." Beneath the words are two stick-figure storks. One carries a bundle labeled "baby boy," the other a bundle labeled "baby girl." Such is the business on the fourth floor north at Colorado General Hospital, the teaching hospital for the University of Colorado in Denver.

Beyond the double doors are the sounds of life: The moans of mothers from the labor rooms on one side of the corridor, the cries of babies in the newborn nursery on the other side. A steady *thump-thump-thump* comes from a fetal monitoring machine, which has been attached to the stomach of a mother in one room to magnify the sounds of her soon-to-be born baby's heart.

Despite the cries from both sides of the corridor, the "deck"—as doctors and nurses often call the obstetrical labor and delivery area—is a happy rather than a sad place. "The deck tends to be a place where things, by and large, turn out well and everybody is pleased," Watson Bowes, M.D., director of the hospital's obstetrical services, says.

Doctor Bowes, with mustache and medium-long hair, stands outside one of the two delivery rooms in the Stork Club. He is dressed in loosely-fitting white scrub clothes, having just come from a successful delivery of a baby girl. He steps to a large, green chalkboard and erases from it the name and medical data of the mother who had just given birth. Two more names remain on the board—mothers still in labor rooms. It is a normal day in the Stork Club. Sometimes they have to set up beds in the halls to handle the overflow.

On the far side of the labor rooms and across another corridor, the newborn child, mother, and father are in the recovery room spending their first nervous hour together as a family unit. Near the nursery is Karren Kowalski, R.N., head nurse for the deck—an attractive red-head dressed in scrub clothes—who has just assisted in the delivery. She sits at a desk completing the necessary paperwork.

An obstetrical nurse, Cheryl Lane, leaves the room from which the fetal heart sounds have been thumping and enters the room next door. She, too, wears scrub clothes—a formless white dress, baggy boots, a hair-cap, and a surgical mask for a necklace. She is one of eight team nurses who work in the obstetrics and gynecology clinic downstairs on the second

floor, examining prenatal patients and counseling them. Both the mothers in the labor rooms are *her* patients and she has come to be present at, and help during, their deliveries.

"One of the hard things to imagine," says Doctor Bowes, "is the contrast between the way it is now and the way it used to be. It used to be total chaos! You either had too many nurses or too few nurses up here, and they all were strangers to the patient who came to deliver."

Cheryl Lane reappears pushing a bed from the labor room. Karren Kowalski gets up from her desk to assist. Lying in the bed is a young woman. Her face shows a combination of panic and delight. She is panting. "It's coming, Cheryl!" she says.

"You're doing fine, Lois," Cheryl tells her. "We've got plenty of time."

Doctor Bowes smiles and steps out of the way. He will not participate in the delivery. That will be handled by one of the hospital's resident physicians, assisted by Cheryl Lane. But he will be available to help in case an emergency develops, as will another resident on the deck that morning. Bed, panting mother, and nurses disappear into the delivery room to be followed by one soon-to-be-father, also dressed in scrub clothes. Cheryl Lane helps lift the mother onto the delivery table, places her legs in stirrups, and covers them with skirts. There is also a medical student there, putting on rubber surgical gloves. "Hurry, Ambrose," she says to the student.

"I hope it's a boy," says the father.

"I'd say your chances are pretty good," Cheryl says. "About 50-50."

While the birth proceeds, Doctor Watson Bowes talks about life in the Stork Club. "Being a university hospital and a teaching center, the residents rotate through—three months here, three months there, three months in the other place. Consequently, in any one pregnancy, the patient may get caught seeing a number of doctors. That lack of continuity really bothered us. The patient, who has a fairly well-defined, but simple, medical problem—namely pregnancy—still deserves nine months of good continuity of care. Rather than solve this problem with the doctors, which seemed impossible, we decided to do it with the nurses."

As if to punctuate his remarks, there comes a sudden cry from the delivery room. It was a cry of joy, not of sorrow. Within a few minutes, Karren Kowalski steps into the corridor and lowers her surgical mask. She is smiling. "It's a boy," she announces. Back in the delivery room, the medical student is supervising the afterbirth, while Cheryl Lane helps the father dry amniotic fluid off his new son.

It is difficult to adequately describe the job surrounding the successful birth of a new baby to someone who has not experienced it. The faces of everyone involved have vanished beneath caps and masks and all you can see are eyes. But those eyes shine with happiness, from doctor, to

nurse, to patient. "Many things that go on in a hospital are negatives," claims Doctor Bowes, "but good things happen here."

Karren Kowalski likes to tell the story about the father who suddenly turned to her after a successful delivery and said, "We're going to name our baby Karen."

"How do you plan to spell it?," she asked.

"How do *you* spell it?"

"With two r's," said Karren.

"That's how we'll spell it."

Karren deserves commemoration. For it was she, in collaboration with Doctor Bowes, who developed the simple but unique idea for personalizing prenatal care now in use at Colorado General Hospital. It is an idea that shows signs of revolutionizing the practice of obstetrics.

Karren Kowalski grew up in Indiana and attended the school of nursing at Indiana University. She graduated in 1965 and then worked for a year in labor and delivery at William H. Coleman Hospital in Indianapolis. She joined the Army as a nurse, where she served in surgery in Vietnam for a year and then in labor and delivery in Germany. It was in Germany that she became familiar with the European midwife system—a system in which a nurse, rather than a doctor, cares for the mother during pregnancy, then delivers the baby.

Karren Kowalski married a soldier while with the Army in Germany. They left the service and settled in Denver, because some friends told them, "You'll love it."

She did love the city, but found herself less infatuated with the prenatal care given patients at Colorado General Hospital, where she went to work as a staff nurse in the obstetrics department. The hospital, attached to the University of Colorado School of Medicine, in Denver, was typical of many teaching institutions in which patients often are not treated as people, but merely as cases upon which physicians can be trained.

"Patients never saw the same physicians, and never saw the same nurses, so care became very depersonalized," Karren Kowalski says. "Under that setup, there was no way to assure any kind of quality, not merely on the delivery deck, but also in the clinic setting, where mothers came in for prenatal checkups. You have very fertile ground when a woman is pregnant. You can do a lot of teaching, not only about pregnancy, but also about health care, diet, and child rearing. Women really are tuned into learning during pregnancy. But when you have 70 patients going through a clinic in one morning, and only two or three physicians, there isn't a great deal of learning.

"The system had evolved in such a way that patients had nobody they could go to with questions. Physicians were overworked, and there were only two nurses in the clinic."

The impersonality problem increased when the patient reported to the hospital to have her baby. According to Karren Kowalski, the patient encountered a new set of faces in the labor and delivery rooms: Regular shift nurses, who would see the patient only during her time on the deck. If the shift changed while the patient remained in labor, still another new face belonging to the nurse on the next shift might take over her care.

But, as Karren Kowalski points out, there was an even greater problem, in terms of providing personalized care of the patient: "Nurses in settings like these probably spent the majority of their time nursing the physician, rather than the patient. A close bond or social relationship develops between nurses and physicians assigned full time to the delivery room, and I'm not sure how positive that is for patient care. And sometimes the nurses nurse the system! That means, instead of being with the patients, nurses would do busy work, or clean up, or stand around talking with other nurses when they needed to give their patients one-on-one care."

After working for a year at Colorado General, Karren Kowalski went to graduate school across the street at the University of Colorado School of Nursing. "I had some very exciting experiences over there, as far as reorienting my whole professional goals and outlook on life." After receiving her degree, she returned to the obstetrical department at Colorado General as head nurse. She now had a better perspective on the reasons for the depersonalized care she had witnessed earlier.

"In obstetrics, for years and years, medicine was totally in control. Women and their families, in fact, had very little to say about what happened in terms of care. One of the reasons was the incredibly high maternal mortality/morbidity rates—at least in the first half of the century. Women had very uptight feelings about childbirth, and, in fact, it was a big risk even to consider pregnancy—not that they had much choice in the matter back then.

"In order to overcome that risk, women totally abdicated any control over how their children would be born. And medicine, in order to try and make the art of maternity care more scientific, put a lot of rigid controls on how care was delivered and on what happened to patients in the hospital.

"But women don't die in childbirth very often any more, and we are now in a consumer age. The consumer is becoming more involved. And another thing that has affected maternal care is the feminist movement. Women, in general, have demanded more control over what happens to their bodies, and this has had an influence on the kind of care they have asked for and on the kind of requests they have made, in terms of how they want childbirth to take place."

When Karren Kowalski decided to try to change the traditional routine, she found an ally in Doctor Bowes, director of the obstetrical ser-

vice. A native of Denver, where four generations of the Bowes family had sold real estate, he went east to attend Washington and Lee University in Virginia, with a business career in mind. It was only in the last year of college that he decided to study medicine. After graduating from medical school at the University of Colorado in 1959, he served his internship at Mary Hitchcock Hospital in New Hampshire, near Dartmouth. He then returned to Colorado General, where he became intrigued by the intensive care nursery then being developed to give sick newborns a better chance for survival.

That interest eventually led him into obstetrics, but it also provided an introduction to the often untapped abilities of nurses. "Nurses are absolutely critical in an intensive care nursery," he explains. "The nurse has to be aware of changes going on from minute to minute, and it's almost one-on-one care. You can't have that many doctors up there, so the physicians have learned to rely on the nurses' evaluations of sophisticated clinical data: The color of the baby, perfusion of the babies, the temperature of extremities, how the baby is breathing. They did a lot more than merely giving medicine. And what they did took a lot of training and a lot of experience and it convinced me that nurses could be utilized in other areas."

It took approximately ten years for theories tried and proven in the intensive care nurseries to move next door to the obstetrical wards. Labor and delivery there had become somewhat routine for doctors, nurses, and even mothers, but it still was in intensive crisis period in a newborn baby's life. A general improvement in obstetrical care occurred around 1970, with the development of fetal monitoring devices and the discovery that certain high-risk deliveries could be performed more successfully by developing the same one-on-one nurse/patient relationship pioneered in the neonatal intensive care units. However, this caused personnel problems.

"If you bring a couple of high-risk patients into the labor room, it ties up nurses dramatically," Doctor Bowes says. "Labor tends to occur spontaneously and at weird hours. You can't plan for it. Hospitals had static work schedules, with five nurses on during the day and two on at night. But patients didn't pay any attention. They weren't interested in what was convenient for for the hospitals in terms of schedules. They just came in willy-nilly. Yet we could not expand our budget endlessly and put five nurses on every shift, because their time would be wasted. There would be times when they would be just sitting around doing nothing."

Doctor Bowes pauses and smiles before explaining the solution to this problem: "So Karren came up with the unique idea of having the nurse come in when the patient was here and go home when the patient was not here."

It was the sort of great idea of western civilization that, if a comic strip artist were attempting to illustrate it, he would show a light bulb flashing over someone's head—in this case the red head of Karren Kowalski. "It was too simple, really," sighs Doctor Bowes.

The new system did not solve the problem of the lack of continuity of care caused by rotating residents and changing nursing staffs—prenatal nurses in the prenatal clinic, labor nurses on the labor floor, postpartum nurses in the postpartum ward. Doctor Bowes continues: "One patient throughout her pregnancy had to relate to dozens and dozens of people, none of whom really had that patient's whole picture in mind. And I think a lot of complaints about what went on in obstetrics were not complaints about 'bad medical care,' but were complaints by patients about the lack of having anybody as their *advocate* in this entire system."

Doctor Bowes pauses again, about to describe the flashing of another light bulb: "So Karren said, 'Well, let's solve that problem, too.' She suggested we have the nurse follow the patient longitudinally through the system. We would take our labor room nurses off the shift, introduce them to the patient when the patient enrolled in the clinic early in their pregnancy, have them see the patient on her regular clinic visit. So, by the time the patient reports to the deck in labor, the nurse who comes in to care for her will have established a relationship with her as an individual. At the same time, this arrangement gives the nurse a head start in knowing the patient's problems. The nurse doesn't need to sit down and review an unfamiliar chart, her understanding of which could be vital—particularly for a high-risk patient.

"All of us on the staff—including myself—were doubtful that Karren could pull it off," Doctor Bowes says, "because it involved two revolutionary changes. First, it meant taking a static nursing schedule, traditional and time honored, and dashing it out the window. You can look around hospitals anywhere, and it's very rare to find the three-shift system violated.

"Second, it meant nurses were going to have to work very erratic schedules. They would be on call virtually every other night—something physicians were getting away from rapidly by forming bigger and bigger groups. It seemed to be anti-human nature to take people at much lower pay schedules and get them to work much harder. It seemed to go against the grain of the way our society was moving. We all said, 'Karren, you'll never pull that off.'"

Karren Kowalski gritted her teeth and replied, "Watch me!"

She first approached the chairman of the medical faculty, suggesting that the school try her idea by using a single team of two nurses who would follow a selected group of patients in the clinic and then come to the deck when they were ready to deliver.

The chairman shook his head: "Nurses are never going to do that."

"We'll just do it for six months," Karren suggested. "It's just a little research project."

Looking back on the situation now, Karren Kowalski comments: "In a teaching institution, it is very difficult to say no to a 'little research project.' "

In December 1971, she recruited two nurses from the delivery room: Joanne Gottschalk and Joan Drukker. They moved to the obstetrics and gynecology clinic on the second floor and began to enroll a group of patients, seeing them when they came to the clinic for their regular visits, first at one-month, then at one-week intervals. The two nurses worked in conjunction with the resident physicians, mostly doing the simple tasks always done by prenatal nurses in the clinic—taking blood pressures, weighing patients, and obtaining urine specimens. They expanded their care slightly by providing counseling and teaching on various aspects of the patient's pregnancy. The nurses could tell them what to expect during labor and delivery because they had been delivery room nurses. Mostly they simply spent extra time talking to their patients, getting to know them and their problems. When the patient reported to the deck, whether during regular hours or in the middle of the night, one of the team nurses was called to come in and assist in delivery.

The pair received little extra instruction other than what might be referred to as OJT—on-the-job training.

"That's a term—first used in the military—for training people to do jobs while they're on them—training people to do more than what they can do right now," Karren Kowalski says. "Doctor Bowes had been in the Army, too, and we used that concept exclusively in training nurses in their extended role."

At the end of six months (utilizing a small grant for computer time which she had obtained), Karren Kowalski sat down with Doctor Bowes and analyzed the infant mortality and morbidity rates of the patients involved in the experiment. They discovered no change.

"We did discover something, though," she says. "We found that the patients loved the system. After they delivered, they sent their nurses candy, flowers, cards—something that rarely happens in this kind of setting, from this kind of patient population. It happens in middle-class hospitals. That's the expected form of behavior, but it usually never happens in teaching institutions, so we knew patients were very appreciative."

Patients also became very trusting. In several instances, mothers who feared they might be capable of abusing their children—or who had past records of child abuse—were able to appeal, through one of the

nurses assigned to her, for psychiatric care for themselves or for their husbands. Karren Kowalski suggests that, without the extra time that the nurses were able to spend developing relationships with their patients, this probably would not have occurred.

The bizarre hours nurses had to work—which many thought might be the major obstacle in the program's acceptance—proved to be no obstacle at all. "Everybody thought I was absolutely out of my mind when I suggested that nurses be on call. They said nurses wouldn't come in at 2:00 in the morning for a patient. In fact, they do!

"Something happens when a nurse comes in at that hour and the patient says to her, 'Oh, Joanne. I'm so glad you're here. I don't think I could have made it without you.' Relationships become established between women that are incredibly strong and that motivate nurses to do things that people said they would never do."

Cheryl Lane explains: "When I come in the middle of the night, there's not the feeling of, 'Uhhhhhh, it's the middle of the night and I have to get up.' Instead, it's, 'Lois is having her baby, and I get to be there with her—and it's so *exciting!*'"

Doctor Bowes says: "I don't think we really anticipated that the rewards would be so great in terms of the increase in personal satisfaction that nurses had in relating to people in a real way rather than in an artificial way. We found that people would rather have that than have their own comfort or more material rewards."

In November 1972, Karren Kowalski and Doctor Bowes totally changed the staffing of the obstetrical unit—forming four teams of two nurses each. Each team is identified by color. The orange team is Martha Hartman and Cheryl Lane. The purple team is Karen Harvey and Maureen Mullen. The pink team is Maura Higgins and Susan Turner. The green team is Betty Jane Johnson and Barbara Orcutt.

A fifth team, the grey team, consists of Karren Kowalski and Joanne Gottschalk. They enroll only a small number of patients, because of having other administrative responsibilities. Joanne Gottschalk, one of the original members of the pilot team, now serves as team leader of the labor and delivery teams in the clinic. Her previous teammate, Joan Drukker, currently is enrolled in graduate school at the University of Colorado School of Nursing. Several other original team nurses have become involved in nurse-midwifery programs or are studying for master's degrees.

During the pilot study, a resident physician also saw the patient during each visit. The residents themselves soon suggested that this seemed unnecessary, that the nurses were capable of handling most routine patient visits unassisted. Should the nurse identify a problem she could not handle alone, she consulted one of the residents in the clinic. It became

a true joint practice. Unless the patient had complications, she saw a physician only on three occasions during her nine-month pregnancy—on the first visit, four weeks before she was due, and on her due date.

In order to expand the knowledge of the newly-recruited team nurses, the hospital offered six class sessions, with members of the medical faculty teaching physical assessment skills, history taking, laboratory data screening, and other related subjects. Each session lasted an hour and a half. Classes have been repeated as new nurses have joined the team. In turn, team nurses soon began to establish classes for prospective parents on such subjects as breast feeding, breathing exercises, and natural childbirth. Fathers not only are encouraged to come to these classes, but they are encouraged to come to the clinic with their wives, when convenient.

"We focus on total family relationships here," Cheryl Lane says. "I like to see how the other children react to their mother's pregnancy, how she explains the pregnancy to them, and how husbands react, too. They get the biggest kick out of listening to the baby's heart. It helps them identify with it, because they are not carrying the baby themselves. They usually want to get involved, but the hospital people often shove them aside."

Doctor Bowes and Karren Kowalski have different opinions as to whether the team nurses actually function as "nurse practitioners." Doctor Bowes thinks they do *not*—at least in the true sense of the word. "They are just nurses with on-the-job training, who have become very astute at what they are doing," he says.

Karren Kowalski, however, disagrees, because team nurses see patients in consultation with physicians, but without the continuous intervention of those physicians. "Although our nurses have not attended special educational programs," she says, "they really are nurse practitioners, because they *do* fill an expanded role."

The team-nurse approach proved so successful that, in a domino effect, other barriers in the obstetrics department began to tumble. Fathers, who under the previous system were merely tolerated around the labor room, now even accompany their wives into the delivery room to help them during childbirth. (Prenatal classes are not required.) After the baby is born, they take charge of the child, carrying it to the nursery. Parents stay together with their newborn baby in the recovery room for several hours after birth. Mothers in the postpartum ward may have their babies with them any time during the day instead of having, as Karren Kowalski says, "a baby brigade where the nurses wheel the babies out of the nursery to the rooms only once every four hours." The percentage of mothers having success in breast feeding their babies also has increased dramatically under the new system of more personalized

care. "We're able to do a better job of teaching and followup when we get to know the patients personally."

"Another big benefit of the program," Doctor Bowes adds, "is that it heads off a number of medical and social problems before they ever get started. In this day and age when the top has blown off the whole medical/legal area, it's amazing how few complaints we get from team patients. I used to receive several irate letters every month. The people writing them rarely complained about what might be called bad medical care. Usually they were angry at not being involved in a decision. They would complain: 'My wife had a Caesarean section, and nobody told us why.' It's now much easier for us to tell them why."

Karren Kowalski tells a story about a prominent man in Denver who was "very much anti-establishment and very uptight about his wife coming to the hospital for care." The physician at first refused to allow the father into the delivery room. Karren argued with him: "If we're ever being set up for a law suit, this is it. Let him in, so he can see we're not going to harm his wife."

As fate would have it, the baby was born with an omphalocele, a situation in which the intestines are not enclosed in the abdomen. "It was a terrible surprise," Karren Kowalski says, "and there were physicians scurrying all over the delivery room. We had to take the baby to surgery immediately. The father could see this phenomenal effort being made by the medical people in the institution for the sake of his child, and his attitude toward us changed so drastically I could hardly believe it. It was a good experience to have happen, because it showed the physicians how important it was to involve the total family. I don't think you can really pull that thing off, however, unless you have people—in this case our team nurses—who really know each family and can make an assessment of how to handle situations when they occur."

Doctor Bowes says: "This system doesn't work by itself. It works because we've got a first-class group of professional nurses who are putting their patients first and their personal lives second."

In addition to their regular clinic hours, team nurses alternate nights and weekends on call. While on call, they may need to report to the deck at any time of the night or day—and remain there as long as they have patients in labor. "There are times when we are up for 36 hours and just feel like we really are not giving the best care," admits Cheryl Lane. "That's frustrating, but the regular shift nurses usually are very supportive. They try to get us an hour or more of sleep here and there."

At first, team nurses received no extra pay for time spent on-call. Recently, however, an hourly payment has been added to their basic wage for their on-call time. And they are paid for the time, whether they are called to the hospital or not. If they spend more time on duty than

normal because of the erratic schedule, they receive compensation in time off later. As a result, a team nurse may work 20 hours one week and 60 the next.

They adapt easily to the schedule, because they like their work. Cheryl Lane, who joined the orange team immediately after graduation from nursing school, says: "One of the reasons I wanted to be on the team was because I enjoyed following a patient all the way through pregnancy. You can develop long relationships, rather than being a nurse on the floor, passing medications, and not knowing patients more than three days."

Approximately 200 babies are born every month at Colorado General Hospital, but only half of them receive the one-on-one care provided by team nurses. The remainder of the deliveries are patients referred from other hospitals or from outside physicians, or, in many cases, private physicians who use the hospital for their deliveries. Many of the clinic patients, members of the lowest socio-economic group, are on public assistance and one of the ironies of the change at Colorado General Hospital is that whereas once they were getting the *least* personalized care, they now are getting the *most*.

"All the things I saw wrong with teaching institutions and the clinic/patient system—the depersonalization, the fragmentation—are true in private practices, too," Karren Kowalski says. "The only difference is that the patient sees the same person, the doctor, even though he spends very little time with her. For the most part he has not had time to find out what's going on in her head. She has to carry a list of questions so she can catch him before he runs out the door."

The success of the experiment at Colorado General Hospital has caused some obstetricians to reconsider their previous methods of giving patient care. A few have begun to restructure their private practices. Doctor Bowes knows at least four private practices in Denver where obstetric nurses are being utilized for extended care. One of these nurses, Sharon Joseph, was doing public health work in the obstetrical clinic at Colorado General Hospital at the time Karren Kowalski was developing her program. She now works in the office of two brothers, Doctors Kenneth and Stewart Gottesfeld. "It would be unfair to say she was a direct product of our program," says Doctor Bowes. "She and Karren developed their ideas somewhat separately, then she went to work with these two young obstetricians who have a very busy private practice. She utilizes basically the same techniques as do our clinic nurses, and they are very pleased with her work and patient response."

Another group of Denver physicians trained a nurse practitioner after taking their residency training at Colorado General Hospital. "In an educational setting, one of the things we have to do is promote good

attitudes," explains Doctor Bowes, "and if physicians training here feel comfortable working with nurses on a professional level, it becomes second-nature with them after they leave. It's more an attitude we're teaching, than a specific way of doing things."

Karren Kowalski adds: "Students and residents learn by example that nurses can be professional colleagues rather than merely employees and assistants. Though the model may not be exportable in its entirety to private practices, the lessons learned should help young physicians and nurses better adapt to new joint practice opportunities in other settings."

As for the financial benefits, Doctor Bowes admits that, because of the nature of the budget at the University of Colorado, he has no means of easily determining the financial impact the nurses assigned to clinic duties have had. He says, however, "I don't think there's any doubt that you can make a private practice more efficient and increase income to a certain extent. But the goal, as I see it, is not to make money, but make life a little bit more pleasant for everybody, including the patient. One of the problems is you get so busy as a doctor and have to work so hard just to keep up with your daily work that a lot of the joy of practicing medicine disappears. It's a great profession, but it can quickly become drudgery if you get too harrassed and too busy. The more efficient utilization of nurses can cure this problem."

Karren Kowalski hints at what the future may bring: "I think there are many varied ways of solving the problems of humanizing health care. It's just that we still haven't stretched our minds far enough to figure out what they are."

H.H.

ON THE CREST OF THE WAVE

One day in 1966, Mary Zako, 34 years old, a housewife, the mother of a six-year-old boy, and a former social worker, told her husband that she had decided to become a registered nurse. His reaction, after a moment, was favorable. He said: "Wow!" So she did.

Her obliging husband was Louis R. Zako, M.D., a general practitioner with offices in Allen Park, a Detroit suburb. His practice consisted primarily of white, middle-class families, many of whom depended for their living upon the nearby Ford Motor Company. Despite his having been interested in medicine from childhood, he knew nearly nothing about the nursing profession, a lack he himself admits.

"Prior to Mary's starting nursing school, I perceived nurses like every doctor in America," Doctor Zako says. "If you ask doctors what nurses do, they don't really know. They know they give shots and pass pills and hand out bed pans, but they know very little about nursing as a positive professional activity."

Doctor Zako pauses as he makes this statement to let its truth sink in. He is tall, well built, with jet black hair, heavy eyebrows, and a thick beard flecked with gray. His eyes glow almost magnetically as he talks. Doctor Zako fills every room he enters with the sheer force of his presence and personality. Even sitting, legs crossed, scratching his head, conversing, in his modest office next to the A & P, he seems to generate energy.

He continues with his point about nurses being the invisibles of the American medical system. "It's not surprising that doctors don't understand nurses, because in medical school we have no contact with nursing students. In intern and resident's training, there is very little joint practice. I'm in private practice now and only rarely will a nurse make rounds with me. Even though people say the doctor and the nurse are a team, the truth is they don't even know what the other one is thinking."

"Before Mary joined me," Doctor Zako goes on, "I had never hired a registered nurse for my office. That was a conscious thing, because what little I did know about R.N.s led me to believe—and I still believe—that what an R.N. is taught in nursing school is totally inappropriate and not useful to an office practice. What does scrubbing in an operating room have to do with making appointments or draping a patient or

consoling a depressed person over the telephone? The skills needed in an ambulatory setting are not those that a person gets in nurse's training."

The situation changed for Doctor Zako after his wife's announcement. "When Mary went to nursing school, I obviously had an emotional investment in nursing. I was excited that my wife wanted to get involved in education again," he says, "because I feel rather strongly that education for every human being ought to be a life-long process. Most of us tend to stagnate intellectually once we finish high school or college. I think that's wrong. So when my wife—at 34—says, 'Hey, I want to go back to college,' that was very exciting to me. When she said she wanted to take nursing, that was very surprising to me. Because she had never exhibited any particular interest in the medical or nursing fields."

Mary Zako, R.N., in many respects contrasts with her husband—although in a complementary way. She is slim, with short, curly-brown hair. She wears a freshly laundered robe of light blue with a patch identifying her as a "health nurse clinician." Mrs. Zako has a pleasant, pretty face and a nice smile. If Louis Zako fills the air with energy, Mary Zako fills the air with warmth.

As to why she waited until age 34 before embarking on a career in nursing, she says: "Nursing was completely different when I was younger. And I don't think I was mature enough or ready for it. I think that both nursing as a profession and myself have evolved."

Mary and Louis Zako grew up in the greater Detroit area. Louis was born in 1931 in Lyster Station, Quebec (pop. 879), where his parents (both of Syrian origin) had moved to manage a drygoods store for relatives. They moved to Detroit within a year after his birth. Though Louis Zako very definitely is a product of the big city, he has a touch of small town in him, too.

Mary was born in 1933 in Keego Harbor, Michigan (pop. 3,092). Her father worked as a laborer in a nearby General Motors plant in Pontiac. She was valedictorian of her high school class, although she deprecates that honor, claiming her class contained only 50. Despite her small-town roots, she seems comfortable in the big city, or at least in its suburban environs.

In her first week at the University of Michigan she attended a freshman mixer. A junior classman, who had volunteered to assist during orientation week—with premeditation—so he could meet some girls, spotted her. "She was just a wide-eyed innocent freshman with bobby sox and a pony tail," Doctor Zako says, "and I went up and asked her to dance."

At Michigan, Mary studied for a bachelor's degree in pre-professional social work, "which means nothing," she says now. "You got a lot of psychology and sociology and, supposedly, it prepared you to go for a

master's degree in social work."

Louis proceeded on a more regulated path leading to a career in medicine, because he had been impressed by a doctor he admired during his youth. At the same time, he took an absolute minimum of premedical courses. "The fact that I took physics is less important than the fact that I took Shakespeare," he insists. "Shakespeare had a beautiful awareness of human nature." After graduation, Louis continued at the University of Michigan in medical school. ("I applied for only one school," he says.) He interned at St. Luke's Hospital (now Rush-Presbyterian-St. Luke's) in Chicago, then took a two-year general practice residency at Oakwood Hospital in Dearborn.

Mary, meanwhile, became a court worker for the Children's Aid Society in Detroit, a police-like job that required her to investigate parents neglecting their children and bring them to court if necessary. "I hated it," she says. "It tore me apart to do the kind of things I was doing." She quit the job to be married.

Louis and Mary were married in the fall of 1957 at the chapel in Ford's Greenfield Village. He earned only $100 a month as an intern in Chicago. Mary looked for a job, and found one as hospital liaison with the Cook County welfare department. She interviewed patients being discharged and made housing arrangements. "This was equally distasteful," Mary recalls. "The welfare allowance was so meager you couldn't place anybody anywhere."

Following residency at Oakwood, Louis R. Zako, M.D., bright-eyed and ready to serve mankind, moved back to Detroit, and hung his shingle in Allen Park. His waiting room filled with patients almost instantly. He explains why: "There are almost 9 million people in the state of Michigan and only some 1600 family doctors. It's like the expressways in the major cities of America. You've got a three-lane freeway that was designed to handle 20,000 cars and there are 100,000 cars using it per hour. Any modifications you make are only going to scratch the surface."

While Doctor Zako fulfilled his mission of providing not only complete, but also compassionate, medical care to at least some of these freeway users, his wife became restless with her duties in the home. She had not continued work when they returned to the Detroit area. In 1960, they had a son, Robbie. As he reached school age, she found herself with more time on her hands. "I'm not a social kind of being," Mary admits. "I don't go out with other women and do housewife things. I felt I was being hemmed in."

With Robbie in nursery school several days a week, she began doing volunteer work at nearby Oakwood Hospital. She did all the ordinary things that hospital volunteers do: She pushed wheelchairs, delivered

mail, did clerical work. But if the Zakos, with their seemingly contrasting personalities, have one common trait, it is an inquisitive mind. She became critical of the hospital's efficiency.

"I began to wonder, why didn't they do things this way, or that way? Then the awareness came to me: If I wanted to change anything, the way to do it was *not* to be a volunteer, because nobody pays any attention to you unless you're being paid. I was eager to do something, but what? That's when I began to think about nursing."

Mary called the Michigan League for Nursing to obtain information, expecting she might obtain an associate degree, permitting her to "do a little nursing." The league spokesman convinced her to return to the University of Michigan for a nursing degree. She spent the next three-and-a-half years commuting daily between Allen Park and Ann Arbor, a 40-minute drive.

"The first summer I had classes from 9:00 in the morning until 5:00 in the afternoon," she recalls. "I would take Robbie to the bus stop for day camp and pick him up late in the afternoon. In terms of housekeeping, this was when I first learned to live with dirt."

A woman in her mid-thirties, she found herself thrust among teen-age girls, all of whom glowed with youthful confidence. She recalled having felt that way once herself: "When I was 17, I thought I knew everything. Even going from a small town to a big university didn't frighten me. Now I found returning to school very threatening. Only my maturity saved me. But I got more out of school the second time than the first time, when some of my interests were more frivolous."

One positive frivolous advantage to her return to school, she admits, was getting better seats to Michigan football games. But her husband remembers: "It was a trying period for both of us, because she had to study late. We would have her schoolbooks in bed with us. We agonized together over algebra and inorganic chemistry."

Mary Zako became a registered nurse in 1970 and went to work at Wayne County General Hospital in the intensive care unit. Rather than having escaped from the trap, she found herself in still another one. "I did not like hospital nursing," Mary states. "I didn't like the supervision. There was not the kind of freedom to relate to patients that I had been led to expect. The rule was: Do it by the rules. The desks had to be neat. The records must be in order. It was almost as though the patient didn't matter. What mattered was we have this institution here and we've got a lot of jobs at stake and we have to keep this place going to keep people employed. I said to myself, I didn't go back to school and go through all of that just to have more of the same."

Her husband adds: "When you go into most hospitals you wonder. Are the hospital visiting hours and the hospital rules meant to serve the

patient's best interests or the best interests of the staff?"

While studying nursing at Michigan, Mary had heard of a program at the University of Colorado to train pediatric nurse practitioners. The concept had appealed to her, but she did not feel sufficiently liberated to move to Colorado to enroll. Wayne State University in Detroit, however, soon began a similar program to train what that school's faculty called "nurse clinicians." Coincidentally, one of the physicians they asked to participate in the program was Doctor Louis Zako. They wanted him to serve as a preceptor and train nurse clinicians in his office.

Doctor Zako had not been content to merely hang his shingle in Allen Park and confine himself to his patients and their problems. He had become involved in what he describes as, "a whole bunch of medical-political things." He served as president of the Michigan Academy of Family Physicians. He belonged to the councils of the county medical society and the state medical society. He was named an alternate delegate to the American Academy of Family Physicians.

Doctor Zako's innate curiosity also caused him to become involved in several innovative approaches to medicine. One such innovation was the utilization, in his small family practice, of a social worker. Jay Ballew, a Wayne State University graduate student, trained with him in this capacity. "That was the first step of my education," says Doctor Zako. "I saw how he was benefitting my patients, so I began to think: Hey, there's more than what I was taught in medical school. Other professionals can do things for my patients that I can't do." After Jay Ballew received his degree, Doctor Zako continued to employ him part-time.

The second step in Doctor Zako's education occurred when the nursing school at Wayne State asked him to train a student in their master's program for nurse clinicians. He readily agreed. The student was Patricia Lach, who had spent seven years as an Air Force nurse, and then became director of a Visiting Nurse's Association in California. Dissatisfied with that, she came to Detroit to try the Wayne State program.

Her work was a revelation to Doctor Zako: "I began to say, wow, nurses know things that doctors don't know—teaching and counseling, for example." He claims his recognition of the role that nurse clinicians could play in providing health care came independent of his wife's experiences, although both admit back-and-forth discussions.

Doctor Zako's involvement with such innovative approaches to medicine, however, began to fuel his own uneasiness and dissatisfaction with his practice—more precisely, the manner in which he was forced, by size, to handle that practice. Like his wife before him, he, too, began to feel hemmed in. It was not merely the long hours. He accepted those

as part of the physician's burden. He caused them, in fact, because of his almost compulsive need to involve himself not only with his patients' ailments, but also with their entire lives.

"I know all my patients exceedingly well," he says. "I know where they work, their children's names, what they enjoy doing. I even know if they have a mistress on the side. I feel that it's an important part of our approach that we know the patients and they know us—as friends as well as professionals. I strongly believe that family practice is the keystone to excellent health care.

"I also happen to believe that the word 'doctor' implies more than being technically proficient—lots more. I believe it encompasses honesty, compassion, sensitivity, and an awareness about life. For example, I think a good family doctor in a metropolitan area ought to be aware of what the economic situation is there—of the fact that a patient may have been laid off work. You know, one of the most common diseases in America is depression. And suicide is one of the leading causes of death among young adults."

Doctor Zako's involvement, first with the social worker and second with the nurse clinician, led him to believe that the team approach was a better idea.

One of the administrators for Metropolitan Health Centers, meanwhile, had been trying to persuade Doctor Zako to "quit the rat race and come work for us. "Metro (as it is called) is one of America's largest health maintenance organizations (HMO). The United Auto Workers had originated the HMO, a prepaid group, in the 50s as a means of providing better health care for its union members—or for anyone else who desired to join. Metro had enrolled 80,000 patients, who were served by a staff of 2,000 employees, including 80 doctors who worked in two hospitals and six clinics.

Doctor Zako saw many benefits in the Metro program. "Potentially, it was a greater opportunity to be involved in team care, having a health care unit. It's difficult, from an economic standpoint, to have a joint practice in a fee-for-service setting. Michigan Blue Shield, Medicare, and Medicaid won't pay for services rendered independently by the nurse clinician or social worker. In prepaid group practice, the patient pays for total care ahead of time, then it's up to the practice director to allocate the care. That was one of the positive aspects."

Only after he had worked at Metropolitan Hospital West for several months did Doctor Zako discover that negative aspects, at least from his point of view, outweighed the positive ones. He was used to becoming totally involved with his patients. His desire to do so was one of the reasons he had become a physician. Perhaps his greatest problem in adapting himself to the group atmosphere at Metro was his unwilling-

ness to confine himself to practicing medicine nine-to-five.

"He got in trouble because he insisted on seeing patients after hours," Mrs. Zako says. "The administrator would come through the office and tell all the assistants to go home, that they wouldn't get paid because it was after 5:00 p.m. Lou would be all by himself weighing patients, taking blood pressures, and writing slips. He was being punished for practicing medicine the way he believed it should be done."

Dr. Zako says: "The leaders of the group, the medical director, the executive committee, the department chiefs, were hostile to the concept of family practice. I knew that when I joined, but I thought I could help them see my approach. I couldn't. I was a radical among 80 traditional specialists."

He also felt somewhat threatened by the increased militancy of the two nurse clinicians who worked for him. One was a student who trained under him; the other was one of her classmates. At that time, according to the social worker Jay Ballew, the nurse practitioners were extremely concerned about establishing their separateness and establishing their identity and were not really able to develop a close working relationship with Doctor Zako. "If you are constantly reminding someone that you are a separate person," he says, "if you are constantly explaining how different you are from them, it's hard to spend much time talking about how similar in some respects you are. On the other hand," he says, "when you point out too many similarities, you run the risk of threatening the doctor. There just has to be some balance."

Both nurse clinicians had been able to expand their roles as competent health care specialists, but Doctor Zako, who describes himself as a Barry Goldwater conservative, was not entirely ready to accept them as complete equals.

"I'm sympathetic," he says. "Nurses have been looked down on for too long by doctors like myself. But when you talk about equality in every sense in a joint practice, there are some problems." He points to his wife's malpractice insurance, which for three years of $200,000-$600,000 coverage costs $29. "Now where is the equality there?" He admits the problem is not with the nurse clinicians, but with others who do not yet comprehend the role and abilities of those nurse clinicians.

As a member of the Michigan Joint Practice Commission, Doctor Zako has become one of the leaders in the movement for obtaining increased responsibilities for nurses, but he preaches caution: "It's not what I feel that is important. It's what patients, legislators, malpractice lawyers, and insurance companies feel. The realities of the situation are that most Americans are not ready to eagerly accept surrogates for their physicians. They have to be sold on the concept."

That final point—that Americans must be *sold* on the concept—got

overlooked when several medical publications began to quote him in articles about patient acceptance of nurse clinicians. After those articles appeared, Doctor Zako stopped teaching in the Wayne State nurse clinician program.

He explains: "The nursing faculty were livid with rage, because I was suggesting that most patients didn't enthusiastically wait with bated breath to be examined by a nurse clinician instead of a doctor, that the concept required some selling, that most patients were more or less resistant and had to be educated as to the advantages. I was correctly quoted as saying that I thought there were real advantages to the patients and that, in time, patients would come to see these advantages. Unfortunately, not all doctors are willing to take the time or effort to educate their patients. I get three or four letters every week from nurse practitioners from all over the United States looking for jobs. For a variety of reasons, they still are having a hard time getting hired."

After only ten months at Metro, Doctor Zako quit to return to private practice. In July 1973, he established Fairlane Family Practice Associates in Dearborn Heights, naming it after the former Henry Ford estate. When Mary Zako received her master's degree as nurse clinician, she joined him in his office—an idea that first formed when Mary was in graduate school. Jay Ballew, the social worker, returned to see patients on Saturday, while holding another job the rest of the week.

The staff also includes two medical assistants, an office manager, a receptionist, and a secretary who manages the records, transcribing notes that the Zakos or Ballew dictate into a tape recorder after each patient visit. Doctor Zako boasts of having the most complete problem-oriented medical records of his patients of any private practice in America.

In looking forward to the future, Doctor Zako says that he and Mary plan to re-evaluate their situation in two years—when their son graduates from high school. "I think we'll go on as a team, but we don't feel we're locked into this practice. There are some real negative aspects to suburban and urban practice. Maybe it's the phenomenon of the grass being greener on the other side, but we would like to be working with people who have a greater need and greater appreciation of what good health care encompasses." As to when and where, Doctor Zako doesn't know.

In any setting, however, Doctor Zako feels an ideal practice for him might include two or three family physicians, a "nice but not opulent" office, a full-time nurse clinician, a full-time social worker, and a physician's assistant. "And I'd like the practice to have enough economic resources to enable me to attempt some innovative work, to do more in the way of research—perhaps to work out an arrangement with Blue

Shield to have half the practice on a capitation basis and half on a fee-for-service basis—to do some other things that are difficult to do in the rat race of private practice."

He adds: "I'm not sure that ever can be accomplished."

Despite having made two major moves in the space of one year, Doctor Zako emerged with virtually the same clientele. Most of his regular patients followed him to Metro when he went there, and again stayed with him when he left. His unhappiness at what he considered the coldness and impersonality of the prepaid group is shared by few of his patients. "He was wonderful anywhere," one woman says. She had related to *him*, she explains, rather than to the structure around him.

The Zakos feel that the Metro break made it easier for their patients to accept the new concept of joint practice. "It wasn't designed that way," she insists. "It did make the transition easier, but that was probably the most hellish year we ever spent, because of the agonies Lou went through."

One unexpected result of the switch was a sudden and precipitative decline in the number of emergency calls received by Doctor Zako on weekends. Prior to his Metro experience, Doctor Zako would receive between 15 and 30 calls over Saturday and Sunday. Now he receives only one or two, usually critical cases. He is at a loss to explain why, except to say: "Perhaps my patients are afraid I might leave them again if they abuse me and impose on my leisure time for non-emergencies."

Fairlane Family Practice Associates now is located in a Colonial-style, brick building next to a small shopping center called River Oaks Square, at the edge of Dearborn Heights. In keeping with the ambivalent nature of present-day life, a sign across the street warmly welcomes visitors to the suburb and, at the same time, warns that they will be find $500 for littering.

The office looks much like every other physician's office. It is worn but clean. A Van Gogh print decorates one wall. Licenses testifying to Louis Zako's competence to practice medicine adorn another. A sign thanks visitors for not smoking. A bookcase contains pamphlets on cancer and leukemia. Patients sit nearby waiting their turn, reading three-month-old copies of *Newsweek* and *Today's Health*. Yet, despite its traditional setting, Fairlane is far from the ordinary family practice, perhaps because of the energy exerted by the presence of Doctor Zako.

"He believes he's on the crest of the wave," explains Jay Ballew, "that he's doing something that is going to be common in the future, but is not so common now. He's a pioneer."

As the pioneers who settled the American West worked best with their wives beside them, so does Doctor Zako. Despite her husband's pessimistic comments in several medical publications, Mary Zako seems

to have achieved almost total acceptance by his patients. Not all rejoiced at the thought of being seen by a nurse instead of a physician. Some refused to be examined by her at first. A few left for other physicians. But most remained to be won over by her obvious professionalism and abilities.

"There is probably some acceptance of me because of the idea that, as his wife, I am the extension of Doctor Zako," she says. "On the other hand, some patients don't know who I am.

"It's difficult, because many patients have been used to seeing the 'doctor,' and they think 'someone less than a doctor' isn't right. But the majority accept me. Many women prefer me. They would rather have pap smears done by me. They make remarks such as, 'Gee, you spend a lot more time,' or, 'I didn't have to wait as long to see you.'"

On this day (according to the schedule on the receptionist's desk), Doctor Zako will see 20 patients about a variety of problems from kidney stones, to removing a cyst, to examining a baby. His wife Mary has six patients on her schedule, most of them for physical examinations. The notations next to half the names are for PHA and PAP.

For this reason, Mary Zako insists to a person observing her: "It's not really a typical day." She explains that usually the office manager, at her request, spaces health examinations throughout her week so she need not do too many at one time. "I don't want to get into an assembly-line routine of doing nothing but pap smears," she says. Nevertheless, the backlog of people awaiting such examinations had increased, necessitating the day's "atypical" schedule.

The first patient, who a few minutes before had been among the magazine readers in the waiting room, is a 27-year-old woman who appears wearing shorts, halter, and sandals. Though suffering from bronchitis, she smokes two packs of cigarettes a day. During the health evaluation, Mary suggests she should stop smoking. The woman does not sound enthusiastic. "I'm on a diet," she says. "I don't think I can do two things at once."

Mary suggests that perhaps she can trim her cigarette consumption to one pack a day. The woman relaxes, like a prisoner just granted a stay of execution. She feels she can survive on that quota. She quit smoking once, but had problems. She even dreamed about smoking while asleep.

They discuss her personal life. (Doctor Zako believes his patients' health cannot be separated from their total personal history, and his wife shares that philosophy.) The woman had worked at a factory, was laid off, now lives on savings and unemployment compensation. She tries to look like a teen-ager. The woman discusses possible future face surgery to cure bags under eyes. Mary does not receive the idea enthu-

siastically. The woman was divorced. "I don't think I'll ever get married again," she sighs. "I was married once—that's enough."

Mary asks her patient to call in two weeks to report on her cigarette consumption. Mary admits after the woman leaves that she should quit permanently for the good of her health, but curing cigarette addicts is no easy task. She has been experimenting in her counseling lately with trying to get patients to moderate, if not give up, their smoking. Sometimes her easy approach works; sometimes she finds it better to have her husband come in and, in an authoritative voice, command patients to stop. "He sometimes can get away with that," she says. "I can't."

After her first patient leaves, Mary comments: "The general population isn't geared to the preventive aspects of health care. It's very difficult to get seemingly healthy people to change their life styles." She recalls a case involving a woman who qualified as a borderline alcoholic. "I enjoy it," the woman rationalized her frequent drinking. "Why should I stop?"

In the division of duties at Fairlane Family Practice Associates, Mary Zako does all the routine health appraisals. "It's better for someone like me to give routine physical examinations and counsel patients," she says, "because I can take more time. When the patients are ill, Lou can use his time and skills for that purpose."

Doctor Zako believes that one major advantage of nurses is that they are less likely than doctors to "shoot from the hip with pills." He feels that a danger exists in over prescribing for well and mildly-ill children. "Mildly-ill children can die from too much medication," Louis insists. "Healthy and mildly-ill children probably should not be seen by doctors."

Mary's second patient had what her husband very definitely would classify as a nurse—rather than a doctor—problem. The woman wore slacks, a blouse—and bulged out of them. She weighs 238 pounds, a fact determined only when Mary asks her to step onto a scale. "I don't pay attention to weight," the woman says, "only sizes."

Mary asks what made her decide to come in? "Well, it just reached the point where it got out of hand," the woman says. "I tried Weight Watchers, and it didn't work. It was too hard getting to meetings, because I worked the night shift. I lost fifteen pounds and thought I'd do the rest on my own. That was my first mistake."

"What would you like to weigh?," asks Mary.

"One hundred forty."

"Do you think that's realistic?"

The woman says yes. Mary begins talking diet with her. She suggests that she keep a diary for the next five days, writing down everything she puts in her mouth—what, where, when, how much, the activity going on at the time, how the food was prepared. Mary explains

the purpose. She wants the woman to become aware that her overeating habits fall into a pattern. This eventually might enable her to change that pattern. "You're right," the woman realizes. "Every time I turn on *Rhoda,* I run out and get a ham sandwich."

After her second patient leaves, Mary Zako says she feels more at ease in her role now than she did three years ago, not only with the patients, but also with the staff. "Originally," she says, "we had a staff that consisted of people who had known me when I was a 'doctor's wife.' That made for a different kind of relationship.

"It was almost a competition between Lou's old assistants and me. They had been with the doctor for so many years, they saw me as an interloper, someone getting between him and them in the office. Often it seemed they were trying to prove they could see something better, or know something more. But over a period of time, our staff changed. My relationship with the newer people is friendly, but also professional."

Doctor Zako sees his wife as providing an extension of his own medical abilities in certain areas. "It's an appropriate use of skills," he says, "not a matter of one-upmanship." He feels the same way about his use of Jay Ballew's talents in his practice. "Jay does a better job than I do with certain problems. He has more interest, more training, and more time to handle socially oriented problems. Now that I don't need to deal with those problems, I can practice medicine more efficiently."

His old patients have adapted well to the new team concept utilized in Fairlane Family Practice Associates. Mary Zako no longer feels compelled to take extra time explaining her role as nurse clinician to them. "I used to spend a few minutes explaining very carefully what I was, what I did, and what I didn't do. Then I realized they still didn't understand. For instance, the patch I wear on my robe says, 'health nurse clinician.' Nursing seems to have a whole multitude of names for similar practices, but people aren't interested in titles. Sooner or later patients react not to your title, but the quality of care you give them."

Her third patient is a woman in her 60s whose husband recently had retired. She wore a flower-print dress and a tired expression. After a routine physical examination that revealed no apparent problems, the woman explains how she seems to have lost her zest for living. "I get very tired doing housework," she says (but noting at the same time that she keeps her house spotless). Mary tells the woman her blood would be checked for anemia, although she suspects her tiredness is not from any physical ailment. It stems from adjusting to her husband's retirement. Mary urges her to get involved in independent activities. "Maybe you could try gardening or walking," she suggests.

"I love to walk," sighs the woman, "but I can't find anybody to walk with."

During a routine eye examination, Mary notices what appears to be a spot so she calls her husband in to also examine the woman's eyes. Louis looks closely, but does not see anything unusual. If he had, he says later, he would have referred the woman to an ophthalmologist. "The key to any team approach is that every person involved has to know his limitations," he says. "It's not so much *my* being uncomfortable about something she does, and taking over, it's *her* being uncomfortable. If she doesn't know, she'll ask me. If I don't know, I'll ask someone else.

"Many people who don't understand the role of nurse clinicians get all hung up on nurses making independent judgments without the doctor's blessing. But what about doctors making judgments? What about a general practitioner making a surgical judgment without a surgeon's help? What about an internist making a psychiatric decision without involving a psychiatrist? There should be a sharing between professionals on important decisions on all levels. Ideally, the lines of communications between nurses and doctor should be as easy and open as between doctor and doctor."

He adds: "The American concept is that a doctor is God's assistant and he knows everything. We've got to change that."

Mary Zako sees her fourth patient, a middle-aged executive who works long hours in union negotiations and has a history of ulcer-like pains. She suggests that he become more active, physically, away from the office to relieve tension. He leaves looking already more relieved for having been told what he knew he should be doing anyway.

She then sees an older woman in for a routine health check. The woman appears quite cheerful and healthy. She is, however, slightly overweight. Mary prescribes the continuation of some medicine the patient has been taking.

Her sixth and final patient of the day is a young, unmarried girl, who once had an abortion. She now is using birth control pills and, after a routine examination, Mary arranges for her prescription to be refilled.

In most instances, the treatment dispensed by Mary Zako does not require prescription drugs. Her husband states: "If she recommends a Novahistine Expectorant, or whiskey and honey, or tells a patient with sinus trouble to use hot compresses, that's not doctoring, that's nursing. My mother, not any medical school, taught me to put hot compresses on the forehead."

Mary Zako now feels completely comfortable in her new world and new role as nurse clinician. What particularly appeals to her is the variety of problems with which her husband's broad-based family practice confronts her. When asked if some future day, she might become restless again and want to move one step further into the medical profession, she shakes her head. "If I wanted to become a doctor, I should

have done so long ago."

Doctor Zako says of his wife: "One of the most joyous things is to observe her grow as a professional, to grow in self-confidence and patient acceptance. I'm delighted when more and more patients call to talk to her, or have an appointment with her, rather than with me. I can see her becoming more secure each day. It is very satisfying.

"Practicing together has enriched our personal life. One of the problems, though, is we tend to get wrapped up in our work—particularly if we have an interest in the same patient—and take the discussion home with us. That isn't so good for our son. But the positive things she's doing enhance my personal feelings toward her. I think you can love a woman without her being a good nurse. But if she also happens to be a good nurse—wow!"

H.H.

REVOLUTION IN BALTIMORE

West Baltimore is a black ghetto neighborhood in the inner city of the old port city of Baltimore. It is an all-American black ghetto—dirty, tumbledown, crowded. Between this ghetto and downtown Baltimore, between despair and hope, lies the professional campus of the University of Maryland at Baltimore (UMAB). UMAB is a wholly functional campus, unadorned by ivy or long lawns. It houses schools of medicine, nursing, pharmacy, law, dentistry, social work, and community planning. Students go there for only one reason: To learn.

Dominating the UMAB campus, iceberg-like in its mass, stands the University of Maryland Hospital. University Hospital, as it is usually called, is the principal source of health care for the people of that part of the inner city. If you are poor and black and live in West Baltimore, University Hospital is your doctor. It is where you go when you are knifed or shot or sick enough to make the effort.

Taxicabs, automobiles, buses, and ambulances swarm around University Hospital. Passengers from these vehicles, and those who came on foot, push through revolving doors and spill into corridors seeking treatment. Overhead signs offer guidance, but somehow people still get lost.

On the third floor, an elderly man pauses outside the elevator and looks up at one of the overhead signs. He moves away from it, halts, and returns to look again, raising one finger to point at the sign, as though commanding it to direct him somewhere. If you had left school at an early age to work in the fields, what would you make of a sign advertising *Ophthalmology, Dermatology,* and *EKG?* The old man stops an orderly in a white uniform, who leads him around the corner.

Around the corner is a corridor, long, like two bowling alleys end to end. It serves as a waiting area. Chairs line one entire wall. The people sitting in these chairs appear to fit a pattern. Most of them are women. Most are middle-aged or older. Most are overweight. Most are black. They have come to the third floor of University Hospital to the primary care unit for treatment of their chronic diseases: Hypertension, diabetes, and various internal problems.

Members of the hospital staff and other patients provide a constant parade before their eyes. A loudspeaker mounted in the ceiling makes continuous, toneless calls for a succession of doctors to call a succession

of numbers. At one end of the corridor, two receptionists supervise the flow of patients in and out of more than a dozen examining rooms: "Mrs. Smith, room three. Mrs. Jones, room eight. Mrs. Brown—"

The crowded corridors and hurried atmosphere seem to brand this as yet another example of the single greatest flaw of American health care: *Impersonality!* People are not people. They are diseases in some hospital's record folder. But a sign behind the receptionists hints at a better order of priorities. "Caution: Human Beings Here. Handle With Care." The sign tells the story correctly. The treatment available at University Hospital's primary care unit is extraordinary—even revolutionary—because of the Hospital's use of a dozen nurse practitioners to treat people with chronic diseases.

Inside one of the examining rooms, a young nurse practitioner leans over a portly woman wearing a white hospital robe. The nurse practitioner—white, freckled, red-haired—is named Vicki Burt. She taps the woman's back, asking her to take deep breaths, let them in, let them out. She moves her stethoscope minutely, listening.

Vicki Burt, registered nurse, having recently completed a 16-week course in advanced nursing techniques at the University of Maryland School of Nursing and still finishing an eight-month nurse practitioner apprenticeship, goes through all the motions and makes all the sounds that previously one would have expected only of a licensed physician. After a comprehensive examination, which takes some 30 minutes, Vicki Burt excuses herself, telling the patient: "I'm a nurse and what I'm going to have to do now is go talk to a doctor."

She crosses the hallway to another room. She sits down there across a desk from a young man with curly hair, a mustache, and a badge identifying him as Doctor Lang. He is a junior resident at the hospital, a "G-2," according to the medical school's terminology, in his second year of residency training after having received an M.D. degree.

When he first arrived at the University of Maryland from North Carolina, Doctor Lang was unhappy about having to work in collaboration with nurse practitioners. He was skeptical of their ability to deliver medical care. He felt that nurses were invading the traditional doctor's domain. Recently, he has begun to change his mind, not because anyone has brainwashed him, but because he has been able to observe the competent work performed by nurse practitioners around him. Though not completely convinced yet, Doctor Lang has begun to see the advantages of having nurse practitioners in order to provide patients with more comprehensive care.

As Doctor Lang listens impassively, Nurse Practitioner Vicki Burt describes her patient and her patient's problems. "She is a 55-year-old black female, told by her previous physician she was hypertensive. She

was seen here by a medical student who did a data base on her. In between, one of her toes became painful."

Doctor Lang suddenly perks up: "Which joint?"

"I don't remember the name," admits the nurse practitioner.

"Just point."

The nurse practitioner indicates a spot on her own foot.

He nods: "Metatarsal phalangeal."

Doctor Lang reaches for the patient's file and spends a minute glancing through it. He nods again. He then follows the nurse practitioner across to the examining room. There he examines the patient's toe, which is red and swollen, asks several leading questions, recommends treatment, suggests several tests, and leaves Vicki alone with her patient.

Vicki Burt sits down and spends the next 15 minutes with the patient, recommending a diet to reduce her weight from its present 200 pounds to a more manageable 150. The patient is told where to go for the tests ordered by the resident. Before she leaves the primary care unit, the patient is scheduled for another appointment.

When the patient returns to University Hospital for continued treatment, she will not be seen by Doctor Lang. He will have been rotated to another section of the hospital, a different specialty clinic, as part of his continuing education. Residents come and go. Four weeks here, three weeks there, two weeks in between. Even if a resident physician wants to follow a specific patient, he may not succeed, being trapped halfway across town at another clinic when the patient reappears.

Fragmented care is a problem found often in teaching hospitals, found *always* in an inner city hospital. The doctors form a passing parade, rotating from one assignment to another, and only the patients remain more or less the same. Even they shuffle from one specialty clinic to another: To neurology for a headache, to gynecology for a vaginal infection, more often than not to the emergency room for treatment of whatever medical crisis strikes.

Treatment obtained by inner city patients is often excellent, but it may be hit-and-miss. Frequently patients—particularly chronically-ill patients, whose diseases are steady rather than spectacular—simply drop out of the health care system. They get tired of long hours in waiting rooms and the often faceless treatment. They just stay home and suffer, until the inevitable crisis induced by neglect brings them back to the emergency room again.

But while Doctor Lang will be gone when the patient with the swollen foot returns, Vicki Burt will still be there. "I know she's going to come back to me," she says. "She and all of the others. I can take time to give her attention. If I don't get to something this time, I'll teach her next time. And that's important to me—to see what's the matter with my

patients and give them personal attention. They're *my* patients, they're *my* responsibility. That's what I'm here for—to help them."

University Hospital has not always provided its patients with such personal and comprehensive treatment and follow-up. The service goes back only to 1973. That was the year of the revolution that established the primary care unit and its revolutionary staff of 12 nurse practitioners.

In the past, patients visiting University Hospital with unspecific complaints and general symptoms were sent to the medical clinic. They might be treated there, or, depending on the diagnosis, they might be referred to one of the several specialty clinics. They were regarded in the traditional way as problems rather than people. They were notations in a file folder. They were "the coronary in Room 313" or "the hysterectomy in 629."

One of the staff recalls: "I've seen a lot of patients in the old days get lost in the clinic system. They would actually disappear between the emergency room and the medical clinic. They got lost to follow-up. They didn't know how to get back in the system."

The change at University Hospital had its beginnings when several members of the medical and nursing faculty took a closer look at the system, and decided that the emphasis seemed to be more on the training of physicians than on the most efficient care of the patient. One member of this questioning group was a clinician named William S. Spicer. Doctor Spicer is a square-jawed man, ruddy of face and gray of hair, and he speaks in a resonant voice with measured words—the commas and periods dropping precisely into place.

He says: "We decided to incorporate into our educational and training programs what we called an 'experience.' It was an experience in the care of patients that would demonstrate what we thought would be the best use of the various professionals in the provision of health care. We decided first to identify all of our needs and put them in some structured model. We would then figure out what kind of people we needed to make that model work. We constructed a fairly simple model. We looked at it, and said: 'Isn't that interesting? A great many things that need to be done for a great number of people do not require a physician.' So we looked beyond the physician. We looked at the field of nursing, and it looked to us as if it was markedly under-challenged, markedly misused."

One of those who worked with Doctor Spicer in the construction of the revelatory model was the director of ambulatory nursing, Rachel Booth. Ms. Booth received her nursing degree in 1956, and her professional experience in the next decade included a four-year stint with the Public Health Service in Alaska.

"Alaska had a different kind of health care system," she says. "We didn't have a great number of specialists, so a larger burden for patient

care was placed on the shoulders of the nurses. It was joint practice before that term became popular. We did teach, counsel, and identify health problems, even in cases of acute illnesses. I developed physical diagnostic skills, and I listened to chests. What I did would have been considered very radical in the lower 48 but, up in Alaska, the few doctors and the limited number of nurses had a very close working relationship. They knew what we were competent to do and didn't hesitate to ask us to handle what would have been considered physicians' work elsewhere."

The Alaskan experience radicalized Ms. Booth. It made her realize how grossly nurses had been under-utilized. If she were competent to provide expanded health care for patients in Alaska, why not do the same in the other states? One thing stood in her way: Tradition.

"When I went through school," she says, "we were taught we really were assistants to the physicians. After you are told that long enough, you begin to believe it's true. A lot of nurses never moved out of that role. That is not entirely true in nursing schools today. Today's student nurses are taught that they do have a vast storehouse of knowledge and skills and they are now taught to handle tools that only a physician handled in the past."

Rachel Booth smiles at what she refers to as the mystique of the tools. "It was always considered that if you handled the otoscope and stethoscope, you were doing physicians' work. Well, that's really the simplest thing to learn. It's what goes on between the ears that's most important—the thinking and the problem solving."

Ms. Booth came to Baltimore from Alaska. She wanted to deepen her skills. She entered UMAB and obtained a bachelor's degree in 1968 and a master's degree in 1970. The University Hospital medical clinic, which provided health care for a large percentage of the population of West Baltimore, had positions for only 29 nurses and nursing aides, but she managed to find a place. At the same time, the patient visits numbered 285,000 a year! "It was wild," she says. "About all a nurse could do was act like a policeman and direct the traffic."

But then she noticed one thing. "We looked at the staff, and we realized that the only permanent person in the clinic was the nurse. She remained at her station long after the resident had moved on to a different place in the hospital. And when the patient returned, the nurse usually knew him by name. Well! Why couldn't she be something more than a traffic policeman?"

Ms. Booth approached the chief of the medical clinic about the possibility of nurses receiving more responsibility. He responded: "I've been here 35 years, but if you can prove to me that the nurse can do more than she is doing, I'm willing to change."

The chief approved a six-week pilot course to teach nurses to assume more responsibility for patient care. That was the start of her association with Doctor Spicer. They worked out the details together. The course included anatomy, physiology, pathology, and physical diagnostic skills. It proved only partly successful. Despite varying educational backgrounds, the enrolled nurses assimilated the classroom information with relative ease. But when it came time to use the physician's diagnostic tools (the ever-present mystique), they became very apprehensive.

"In fact, they got so apprehensive," Ms. Booth says, "that we had to stop our pilot course and re-examine our philosophy of *why* we were doing this, and *what* we intended to gain by it, and where the future of the nurse practitioner lay in the field of health care and nursing."

After reflection, Ms. Booth and Doctor Spicer decided they were moving in the right direction with their pilot course, but that it should be more comprehensive. Nurses should be carefully selected for enrollment, to make certain they were capable of expanding their nursing skills. Accordingly, they decided to write a curriculum for an expanded program for preparing nurses to assume even more responsibility. In 1971, they established a nine-month, part-time program, and enrolled, as guinea pigs, nine nurses from University Hospital's ambulatory division and three members of UMAB's school of nursing faculty.

The ultimate step came the following year. The UMAB obtained a National Institutes of Health grant. That made possible two full-time, four-month sessions—one in the fall, the other in the spring—for the comprehensive training of nurse practitioners. That program remains in effect today, graduating between ten and 16 nurse practitioners from each session.

The first class enrolled in January 1973. It numbered 12 nurses. Students alternated their time between attending classes at the school of nursing and learning, under physician preceptors, in a clinic setting across the street at University Hospital. One participant of that first class was Rachel Booth, who enrolled as a student and became qualified as a nurse practitioner. She continues to maintain a small patient population, limited by her administrative duties.

The competition for the few positions in each class has now become severe despite the fact that UMAB's School of Nursing makes little attempt to advertise its program. Doctor Spicer and Ms. Booth say they carefully avoid recruiting the "best nurses," for fear of being accused of pirating them away from their current jobs. Nevertheless, word-of-mouth can be an important tool. Somehow those "best nurses" learn of the program and eagerly seek to enroll.

Each semester, nearly 100 nurses request information about the program. After a preliminary screening, approximately half that number are

encouraged to submit formal applications, which include a commitment from their director of nursing and their physician preceptor. An admission committee examines these applications, invites the applicants to to appear for interviews, then prunes the list down to about 20 hopefuls. Doctor Spicer and Ms. Booth next visit the applicant in her home setting. They interview the applicant, the director of nursing, and the physician preceptor. A final elimination by the committee cuts the number of those accepted into the program to around ten. As many as half a dozen added positions in the program may be filled (in one of the year's two semesters) by members of the University's School of Nursing faculty.

"No," Doctor Spicer says. "We don't have any trouble recruiting for our program. If we opened the doors we could recruit every competent nurse in the hospital. It used to be that the top job in clinical nursing was in the intensive care unit or in the emergency room. That's no longer so, because nurse practitioners are the only ones who function as primary providers. All the others—no matter what you say about their technical skills—still function in dependent roles. They can give drugs as authorized, monitor the coronary care unit, and it's all very exciting, but nurse practitioners are the only nurses who have such a high level of responsibility and independence."

Not only do nurse practitioners challenge and threaten their former peers—the staff nurses—but they also challenge physicians: "Medical centers traditionally have had as their highest role models the most specialized sub-specialists. There has been more prestige in the inpatient service, where you bring the patient into a trapped environment and work up this 'very interesting problem.' It becomes extremely threatening to this form of life when you suddenly develop a program and attract competent people into other areas of medicine."

Doctor Spicer and Rachel Booth attempt to influence physicians by involving them in training roles as preceptors to nurse practitioners. They also help to educate future physicians by causing them to work with nurse practitioners in a clinic setting—specifically the primary care unit at University Hospital. Although one function of the dozen nurse practitioners working there is to eliminate fragmented care and provide better service for clinic patients, a perhaps more important side benefit is the subliminal education given interns and residents rotating through the clinics. During their stay in the primary care unit, these physicians-in-training have ample opportunity to observe nurses in expanded roles. When they eventually complete their residency training, they may be motivated to enroll nurse practitioners in their own practices.

"Nurse practitioners are very valuable around here," Robert Borushok, M.D., a junior resident in charge of one of the two, six-nurse practitioner teams, observes. "They take care of a lot of the simple problems and allow

the house staff to follow more complicated ones. Because of the nurse practitioners, more people are able to be seen as outpatients than normally would be possible with the medical staff. They've been likened in their work to senior medical students. Their background, however, is quite different. They know very little about the pathogenesis of many diseases. That is my job here."

A senior resident, Mark Jacobs, M.D., adds: "When you talk to a senior medical student, he is more interested in why and how does it happen than in the effect. It's just a different approach that I think physicians have, but the result is the same good patient care. You don't have to understand why a patient gets sick from a disease to be able to take care of him."

The primary health unit at UMAB has become a model of how to furnish treatment to large numbers of people, while still permitting them personalized contact with their health providers. A patient coming, without an appointment, for treatment at University Hospital arrives first at the adult screening area on the first floor. Some patients will have been referred to that area after a visit to the emergency room. Physicians in the neighborhood refer others. "Doctors in the immediate area often see 150 patients a day and only take care of minor illnesses," Doctor Spicer says. "When anything complicated flags their attention, they say, 'Go to University.' "

A nurse interviews the new patient in the adult screening area. She decides, by the nature of his complaints, who should see him first. Normally, a resident physician makes a preliminary examination, obtaining what is called a "data base," then refers the patient to one of the hospital's many specialty clinics, or to the primary care unit on the third floor.

The primary care unit is under the supervision of a senior resident. He has beneath him junior residents and interns, as well as a dozen nurse practitioners divided into two teams. The senior resident functions as team manager. He assigns patients to different members of the unit and assumes patient responsibilities according to the complexity of the disease. Because he is interested in expanding his own knowledge, he occasionally becomes involved in particularly interesting cases. He also serves as the major educator of the unit.

Immediately beneath him are two junior residents. Each supervises a team of nurse practitioners, with whom they serve in joint practice. They function like consultants, providing medical backup and advice on more complex problems. They also have the opportunity to become involved more directly in any specific cases that interest them.

Each team includes a half dozen nurse practitioners who provide primary care for patients. On an average day, a nurse practitioner will see one new patient and six or eight regular patients. The latter normally

take half an hour, or one unit, of a nurse practitioner's time. New patients, who will need to have a complete physical examination, receive three units of time. Transferred patients receive two units.

Interns also function in the unit and fit in loosely between the junior residents and nurse practitioners. They receive assignments to examine specific patients, depending upon the complexity of their problems.

A clinical pharmacist serves the group as do aides and receptionists. Patients who need more specialized treatment than can be provided by the primary care unit get referred to other parts of the hospital. Eventually, however, they return to their primary care provider, the nurse practitioner.

Following the program's initial success. UMAB's School of Medicine began to assign senior medical students to spend time with the unit. Recently, the school began sending their junior medical students over as well. Any individual receiving medical training at UMAB, therefore, obtains intermittent, but continuous, exposure to nurse practitioners. Members of the house staff (G-1, G-2, and G-3) rotate through the primary care unit for six weeks as interns, four weeks as junior residents, and four weeks as senior residents—for a total of three-and-a-half months, or approximately ten percent of their time, in training. Most of the young physicians consider those months a richly rewarding experience.

The success of the program is now more than merely apparent. It can be clearly documented. Among the patients suffering from hypertension, the percentage of those under control is now much higher than it previously was. The compliance rate of those taking medicine has increased. The number of patients who fail to appear for appointments has decreased.

And not only that. A questionnaire attempting to measure patient satisfaction resulted in a remarkable response. Despite the fact that the University Hospital cares for the lowest socioeconomic population, nearly 70 percent of patients responded to the questionnaire. Of this number, 93 percent described the services of the nurse practitioner as satisfactory, or very satisfactory. Only 5 percent rated it unsatisfactory. Two percent were undecided. Pamela Kerr, a nurse practitioner who has worked with the primary care unit for seven months, recalls only two patients who told her they would rather see a doctor.

"The real beauty of the nurse practitioner is continuity of care as well as personalized and individual care," says Rachel Booth. "When the nurse practitioners identify problems, they can follow-up with their patient because they have long-term contacts. They know, for example, if they don't help the patient get more money from the social services, then that patient cannot be compliant with the therapy they recommend."

"We are here five days a week," Susan Edwards, a nurse practitioner

says. "Whereas before, the interns were here only one day a week—if that. If a patient has a problem, when they call we can talk to them. That has been a big factor in getting patients to understand their illnesses better and to comply with treatment. Patient education is very important to patients who are chronically ill, but stable. In the past, they didn't understand a lot of things and often no one had the time to explain their treatment to them, or to reinforce what education they did receive. We have the time to explain."

H.H.

WORKING *WITH* HIM

When, in the early winter of 1971, R. Michael O'Harra, M.D., turned from private practice of pediatrics to become one of the founders of the Arizona Health Plan (AHP), a pre-paid health maintenance organization funded by the Connecticut General Insurance Co., on McDowell Road in Phoenix, he invited his office nurse, Stephany Van Dyke, to come along. Ms. Van Dyke accepted without hesitation. She knew that the move would be a big change, but she thought that change was what she wanted. As it turned out, she was right in both respects.

Doctor O'Harra had his reasons, too, for change. "One of the things that influenced me in joining in the AHP venture was the understanding that the facility would use nurse practitioners and physician-extenders," he says. "One of the dissatisfactions of my former practice was that I was forced to do a lot of things that I shouldn't have had to do—things that didn't fully utilize my skills, things that could have been done just as well by somebody else. Another thing was the pre-paid concept. That appealed to me in principle. And then, we were going to be fully computerized. That gave me the feeling I'd be moving into the medicine of the future. And then it was decided that I would head the pediatric department. I wanted to try my hand at administration. But the main inducement was the physician-extender idea."

And that brought his mind around to Stephany Van Dyke. "The minute I agreed," she says, "I began to feel unsure. I'd been jogging along as an old-fashioned office nurse. I didn't know just how I was going to fit into AHP. But we sat down and talked about that. And Mike came up with a choice. I could come in as head nurse in his pediatric department. Or I could move up to be a pediatric nurse associate. That last did it. The idea of being a PNA suddenly really appealed to me. I'd read a lot about nurse practitioners and joint practice, but I'd never given the idea of going back to school for that training very much thought. But now I did. And we looked into it, and a new PNA program was just starting up at Good Sam, and if I went into it, I'd graduate in time to join Mike at AHP for the grand opening. If was a four-month course. And that's the way it happened."

Ms. Van Dyke enrolled in the nurse practitioner program at Good Samaritan Hospital and it was there—in the medical/physiological area

—that she (like so many fledgling nurse practitioners) felt her greatest inadequacies.

"There were five of us in our class, and I was convinced I was the dumbest of the lot . . . as if I were there by luck. Just for basics," she says, "I had no idea how to use a stethescope or an otoscope. I needed to know variations from normal, physical exam procedures—the list seemed endless. Then, gradually, as I went along in the program, I learned that everyone had their strong and weak points.

"Of course, we all felt the really important thing was the physical part. But the director of the PNA program kept stressing the counseling part. She later told me that interest in the physical part was common with every class—that nurses wanted to learn about heart murmurs and so forth. I found out, just as she'd said, the physical things were the easiest part of what I eventually did as a PNA. With counseling, there just aren't those easy one-two-three steps you can take. So, I'd advise any in-training PNA to get as much on counseling as she can."

At the same time Ms. Van Dyke attended classes, discussions went on between the future PNA and Doctor O'Harra and also between the board members of the Arizona Health Plan and the two practitioners who would be the foundation building blocks of the pediatric department.

The subject of their roles was under their constant scrutiny. "I saw myself as dealing with kids who were hospitalized or those acutely ill who I felt needed a physician," Doctor O'Harra says. "Not that I didn't want to do some counseling and well-baby work. But I wanted to limit that. I wanted to get into the administrative end of AHP, and that time had to come from somewhere."

"Well-child care and counseling was how I saw my role at first," Ms. Van Dyke says. "I hope to provide better total-patient care by devoting more time to these areas than we had in the other practice."

After numerous discussions, job descriptions were drawn up for Ms. Van Dyke, Doctor O'Harra, and the others who would be working with them in AHP's pediatric department. "We have those old job descriptions around here somewhere," Doctor O'Harra says, "but they really aren't valid any longer. They've been rewritten about ten times since we opened up the practice.

"I have to admit I wasn't familiar with the term joint practice when we started. I thought joint practice meant a group of physicians working together, rather than a practice in which a physician worked on an equal footing with a nurse practitioner. But Stephany and I talked a lot about the way we'd be working together . . . and not *just* the two of us. Also under consideration was how we could expand the sharing of duties to include other practitioners.

"Then, we also had to figure out what to do with fee-for-service people

that we'd have to handle," Doctor O'Harra says. "You see, you just can't get completely away from patients who aren't members of an HMO plan. They come in for one reason or another—their insurance has lapsed or they're somebody's relative. You have to develop a whole sub-system for dealing with them. So we worked on this during the hiatus—which was really kind of a trial period."

Guidelines, plans, and principles were worked out with the AHP Board by Ms. Van Dyke and Doctor O'Harra as the nurse completed her PNA training. For example, one of the chief interests of the AHP Board was in keeping charges and expenses as low as possible. Thus, it was decided early on that the fee for any service given at AHP—be it a lab test, a physician visit, an x-ray, or a PNA visit would be billed at the same rate—$2. In addition, pre-established rules were set forth, such as age limits on the Pediatric Department's patients—up to the age of 14, at which time adolescents would be transferred to the Family Practice Department.

One of the important things worked out in the "trial period" was the matter of Ms. Van Dyke's salary. It was agreed with AHP that Doctor O'Harra would be making slightly more than he was in his previous practice because of his added administrative duties. But when it came to the nurse practitioner's earnings, not only AHP but Ms. Van Dyke herself were breaking new ground.

"There were four PNAs in Phoenix at that time," she says, "but they were still earning the same money as a regular staff or office nurse. So I got figures from job descriptions and job offers of people looking for PNAs. From those figures, I got a range of between $10,000 and $16,000 a year.

"Then one day I had a meeting with Doctor Donald Shaller, AHP's medical director, who just came right out and asked me, 'Well, what do you think you're worth?' That gave me a scary feeling. But I said I'd like to be making about $12,000 a year. That must have seemed reasonable, because he offered me just a little less with benefits that brought it up to that level."

As the official opening date for AHP grew close, Ms. Van Dyke experienced momentary qualms. "Mainly, the questions I had were in relation to myself. There was that general insecure feeling I suppose everyone gets when they break into something new. I wondered, 'Just because I have this piece of paper saying I'm a PNA, am I really qualified to take on the responsibilities I'll be getting?'

"In addition, looking around me at other PNAs who were practicing, I felt some negative things about the practices they were in. For example, in one, the patient had a choice of seeing either the PNA or the physician. I didn't want that any more than I wanted the nurse practitioner charging

less than the physician. I just didn't like the look of those kinds of things and didn't want them to be true of our practice."

There was little basis for such fears, since the broader outlines of Ms. Van Dyke's role had previously been firmly established by the physician and the nurse practitioner. In any case, when the Arizona Health Plan officially opened its doors to its pre-paid medical patients there was hardly time to indulge such fears.

Almost before the doors were opened, it seemed that the patients (now numbering 27,000 pre-paid members and 3,500 fee-for-service) were lined up and waiting. They came to see the corps of physicians (18 full-time and 18 part-time at present), nurse practitioners and physician extenders (currently totaling 6), staff nurses (now 36), and various aides, technicians, and administrative personnel. That was in 1972. Three years later, in 1975, the employees at AHP numbered 187.

Busiest of all the individual AHP departments was Pediatrics—or so it seemed to Doctor O'Harra, Ms. Van Dyke, the two other physicians who had joined them, and their crew of staff nurses. But hectic as things were, it turned out that their planning had been on-target. Things were getting done efficiently and smoothly. Parents seemed satisfied and impressed with the care. The children marched away after being treated or examined, a gift balloon in hand, without being aware that they were participating in something new.

One of the most gratifying things to Ms. Van Dyke was the way the youngsters took to the waiting room she had helped design. The room is laid out in a series of levels on which active kids can romp up and down. The floor is completely covered with a bright, vibrant shag rug. Against the walls are a series of rug-covered, eye-catching wheels of various sizes that an energetic child can spin.

Doctor O'Harra explains the patient processing procedure. "First, the patients are sent a packet explaining how to use the plan. The packet includes history forms to fill out and return. These forms are processed mechanically by our staff and a printout obtained. At first, the physicians were screening these printouts. They decided whether the child should then be seen by a physician or the nurse practitioner. Once that appointment was made, the practitioner went through a series of protocols we'd developed to determine what diagnostic tests were needed, or if up-dates on immunizations were called for. If some chronic condition was discovered, the child was turned over to a physician for treatment in accordance with a plan based on a problem list. As for acute care patients, the physicians handled all of these at first. We also did almost all the acute follow-up, hospital visits to sick kids or the new mothers and newborns, and some counseling.

"Stephany was mainly into well-child care, as we'd planned. She also

saw new babies and mothers unofficially in the hospital, made home visits, did exams for school and camp, and—well, a lot of other things."

"Yes," Ms. Van Dyke says, "like counseling expectant parents and teenagers, making referrals to other physician-specialists, ordering tests and lab work, and giving telephone advice."

The initial stages of the practice being established were so successful that the marketing people from Connecticut General Insurance Co. predicted a tremendous influx of new subscribers—far more, as it turned out, than actually came into the plan during the first years. For the predicted patient load, two additional PNAs and one physician were added to the pediatric staff. As Doctor O'Harra points out, this was to have a significant affect on the role of the PNA.

"For a time, we were simply overstaffed in some areas—like the PNAs. So we started looking around for things they could do to take a bit of the pressure off the physicians."

So, within a short time, Ms. Van Dyke and her sister PNAs, Esther Wiebke and Barbara Reardon, found themselves in unexpected areas of medical care. They also found themselves extending their services even further in those nursing areas in which they were already involved.

In the strictly medical area, the chief change in the role came in acute care. At first, the nurse practitioners saw no sick children. Sick children were automatically scheduled for physician appointments when parents called in, or if they happened to be ill when appearing for well-baby care. Now, although all acute cases calling for an appointment are still the sole province of the physician, the nurses do handle such self-limited conditions as sore throats, ear infections, and other minor ailments. Using protocols developed by the physicians and the PNAs, and PNAs not only examine and diagnose, but they also prescribe medication and handle follow-up. There is always a physician in the pediatric department to confirm the diagnosis and treatment.

Ms. Van Dyke describes her initial reaction to the expansion of her role in this direction. "Initially, of the three PNAs, I was the one who balked the most. I'd had the least experience—and with sick kids absolutely zilch. I felt that if we were going to be put in the position of providing sick care, then we needed physicians who would spend a lot of time working with and teaching us. And you know how that is . . . no one has time.

"But I finally came around to their way of thinking," she adds. "It wasn't a question of them saying 'This is what we want you to do' or 'This is what you *will* do.' It was more like them presenting a problem to the PNAs and all of us working it out. So now, if a child comes in with a cough or sore throat, I order the medication without the physician checking the child. A lot depends on the availability of the doctors and

on how comfortable I feel treating a certain illness. If I'm sure it's an ear infection with no complications, and if the doctor is busy, I just go ahead and treat the infection. If it's a borderline ear, and if I'm not sure how it should be treated, that's when I call the physician in."

In addition to handling a limited number of acute-care patients and follow-up on them, the nurse practitioners also began following up patients originally seen by a physician. "I don't hesitate to use any of our PNAs for my follow-up visits on ear infections and the like," Doctor O'Harra says. "If something really doesn't look normal to them when they see a kid, they're not going to tell the patient, 'Gee, I don't know what's going on.' They'll just get one of the physicians in to look at the condition."

Another medical area the PNAs have gotten into is in care of and follow-up on chronics. "Our biggest percentage of chronics are asthmatics," Doctor O'Harra comments. "On these, we're using chiefly the PNAs to monitor these patients and provide on-going care. Barb Reardon is getting the histories and home evaluations, our head staff nurse is doing the skin tests, and the other PNAs provide the counseling and education. So we physicians see these kids only when they're really sick.

"As for the balance of the chronics, we don't have a big enough load of any one type—for example, only about 10 diabetics—to make it worth the PNAs while. Also, since we have too few patients, I don't think the nurse practitioners would feel comfortable giving this kind of chronic-patient care."

The PNAs are now drawing up problem lists on new patients after history and initial interview/exam. "The initial health evaluation visit, and who handled it," Doctor O'Harra says, "came about through evolution. Early on we erred in having the physician handling almost all of them. But once we saw that there was a great deal the PNAs could do in that initial visit, we realized they were the ones who should probably be doing it.

"Also, let's face it, most of the kids that have a real problem are going to come in to see a physician as soon as they get into the plan. So the physicians will see these sick kids first anyway. They'll have come in even before they have their initial health evaluation visit. So, currently, the only kids over the age of two that I see after the PNA does the initial evaluation are the ones she decides I should see immediately. On the others, she just schedules them for their next periodic check-up. The schedule for this was similar to that proposed by the PNA program at Good Sam. The physician would see the newborn every other visit, then —after the age of two—only the PNAs would see them for annual well-check-ups. So it could very well happen, that if a child didn't get really ill after the age of two, I might never see him or her again."

The PNAs also care for expectant mothers and newborns. At first, Ms. Van Dyke saw the mothers during home visits and didn't see the infants, officially, until they were two months old. "We now get a printout from our family practice department and the OB-GYN consultants to advise us on the number of babies we have coming up," she says. "From this printout, we also schedule Expectant Parent Classes. The parents are notified to come in for the two-session classes."

Communication between the physicians and the PNAs on individual patients takes place on a catch-as-catch-can basis between appointments or in spare moments. However, this is supplemented by further discussion during the weekly staff meetings and by communication that takes place through the problem-oriented record used throughout AHP.

"If we come up against something we feel we can't handle as a PNA," Ms. Van Dyke says, "and if the physician just isn't available, we schedule time the next day so the patient can come back and we can all get together on the problem."

"As for the weekly staff meeting," Doctor O'Harra adds, "everyone from the department is invited, right down to the receptionist. Aside from going over administrative things and discussing individual patients, we might go over some topic, such as the over-indulgent mother and how to handle her."

The over-indulgent mother was, however, the least of the problems encountered by Doctor O'Harra and Ms. Van Dyke during the stages of establishing the practice. "Patient acceptance—except for a very small minority—gives us no trouble," Doctor O'Harra says. "It was the medical community in Phoenix, and even the doctors and ancillary people within our own facility, that gave us the hardest time.

"It was difficult, for example, for the physicians outside pediatrics to understand just what the PNAs were doing, what they could do, or whether they were doing a good job. That situation is improving all the time. We try to seize on every opportunity to show a family physician, for example, how a PNA could benefit him. Fortunately, the head of our Family Practice Department—who was at first a non-believer—is really beginning to see how a nurse practitioner can make his life a lot easier. He now has two nurse practitioners on his staff and is looking for a third.

"With the ancillary people, we also got a good deal of criticism. They kept saying 'You can't do that. You can't have that nurse ordering x-rays or lab tests without a physician countersigning the order.' We more or less have had to *educate* these nay-sayers."

"The way we did that," Ms. Van Dyke says, "was to have the physicians return any lab or x-ray report that a PNA ordered but that was deliberately returned to the physicians instead. Mike would just ship it back with a note that he hadn't ordered it and that it should be sent to the

person who did. After a while, they began to catch on. We took the same tack with physicians I'd refer cases to. They just didn't want to accept the referral from me. It's taking a bit longer to convince these physicians we should be doing what we do."

Looking over how the practice runs today, both the physician and the PNA feel they are more productive now than in the previous practice.

Tasks Doctor O'Harra has turned over to others, in order to increase efficiency, include counseling (except in cases where he feels he can help), examinations of teen-age girls, and all the minor acute illnesses. Yet he doesn't feel that such delegation has affected his relationship with his patients. "I'm probably spending less time per patient than I did in my old practice," he says. "But, I have more time to devote to more challenging problems. And another interesting aspect is that the patient who doesn't really want or need a very close physician-patient relationship is attracted to the AHP."

Several plans and imminent changes may alter considerably the future of the practice. One such change could bring a PNA or nurse practitioner onto the Board of Directors of AHP. Another development, the obtaining of staff privileges at Good Samaritan Hospital for the practice's PNAs, will also mean more prestige and increased responsibility for AHP's practitioners.

"In the beginning, we really weren't welcome in the hospitals," Ms. Van Dyke says. "They more or less let it be known that we could come over—but only as long as it was unofficially. In other words, we couldn't write in the charts or do anything like that. As Mike put it, we could buy flowers and go over as grannies—grandmothers are allowed to offer advice. They're famous for it.

"Now, we've applied for staff privileges, which I believe we'll be getting as a matter of course. With these privileges, the pediatricians won't have to see the newborns. We can help handle them and write up orders."

Another change in the PNA list of duties will take place with respect to care and counseling of chronics. "We'll be taking patients with specific common illnesses and having the PNAs handle them in groups," Doctor O'Harra predicts. "I think that, if we're going to stick to the traditional one-to-one physician-patient encounters, we're never going to get the cost of care down to where it should be. Since one of our goals is to increase efficiency and lower patient cost, group treatment seems the way to go. The PNAs will be able to do this quite well, while maintaining the quality of care."

Ms. Van Dyke has reflected on her experience at AHP. For nurses who complete NP training and are about to enter into a joint practice, she offers seven suggestions: (1) Believe in yourself, know what you want,

and stand up for what you want; (2) Confirm that you and the physician have the same philosophy about what an NP is and how she functions; (3) Make sure the physician is confident of your abilities; (4) Discuss protocols with the physician and establish how they should be used; (5) Take a hard look at the staff with which you'll be working and make sure they're educated to your role; (6) See that patients are educated to what your role is; and (7) Stress that the patient should *not* be given the option of seeing a physician or nurse practitioner.

Doctor O'Harra's recommendations to physicians and nurses going into a joint practice are much like those of his associate. For physicians, he suggests, "Define the roles before you start, use someone else's example or analyze your own likes and dislikes. Also, an absolute necessity is a two-way incubation or trial period that gives both the physician and the nurse an opportunity to back out of the arrangement within a given period without suffering a loss."

In addition to seeing eye-to-eye on advice to future members of joint practices, Ms. Van Dyke and Doctor O'Harra are also in agreement on the prospects of joint practice for the years ahead.

"I see it expanding more and more in the medical profession," Ms. Van Dyke says. "But, in the future, I think the nurse practitioner will take an even more active role in relation to the physician—working more actively *with* him, rather than *for* him."

"I agree," Doctor O'Harra adds. "Medicine is really changing. As our expertise in eliminating some of the common diseases increases and as educational requirements for becoming an expert in some fields is getting greater and greater, a situation is being created in which a lot of minor illnesses will require only a very standardized form of treatment. Now, this treatment needn't come from a physician. So as this comes about, there will be more use for the PNA and the like to take this kind of treatment over.

"But as far as joint practice is concerned—at whatever level—it's really a relative kind of thing. In a sense, most physicians and nurses have always been involved in some form of it. We've all heard physicians say, 'This is *my* nurse, and here is a list of the things she does *for* me.' Well, we've just changed and enlarged that list a bit. So when people find out I work with a PNA and say, 'My God, you don't let a nurse do all that, do you?,' I just point out that they use their office nurses to diagnose and treat all the time—only that office nurse is doing it over the phone. 'At least *my* PNA *sees* the kids', I tell them."

R.O.

THEY ALL CALL LINDA

At the time she was turning 30, Linda L. Witcher, a pretty, blonde woman with a pleasant small-town manner, found her life in crisis. Her marriage to a young Lutheran pastor was breaking up. That meant, among other things, that she would soon be on her own, and she had three small children to raise.

"I needed a job," Mrs. Witcher says. "And that was just the problem. I had a professional skill—I have a bachelor of science in nursing. But the hours that a private-duty nurse must work are too odd, too irregular. They are all wrong for rearing children. A hospital job was almost as bad. Hospital nurses go to work too early in the morning. I wanted to be home when my children left for school. It just seemed practically hopeless. And then I heard about something, something interesting. It turned out to be my future."

This was in Kansas City, Missouri, in 1972, and the foretaste of her future that came to Mrs. Witcher was the announcement of a brand new course for the training of pediatric nurse practitioners to be given at Children's Mercy Hospital there. Mrs. Witcher enrolled. Three days a week, for 11 months, she attended (in the company of five other students) lectures covering every phase of pediatrics. In addition, two days a week, she saw young patients in the hospital clinic, taking histories and performing physical examinations.

"Then, for my preceptorship, I spent a month each in the offices of three pediatricians in private practice," she says. "I saw patients on my own, but the experience was less than satisfactory. The doctors didn't really give me the autonomy I needed to see well babies, and they themselves were so busy they couldn't take much time with patients. They spent all day seeing well babies, and they were always treating the sick ones over the telephone. If they had hired a nurse practitioner, she could have seen the well babies."

Mrs. Witcher spent the year following her nurse practitioner course teaching pediatric nursing in a small regional college in Kansas City, Missouri. Then she found a job as a nurse practitioner at the University of Kansas Medical Center in Kansas City, Kansas. The Medical Center had pioneered in the 1960s in teaming doctors and nurses together. Since that time, the Center's family nurse practitioners program had graduated

a total of 70 women. Four or five of these practitioners had worked in neurology, hematology, and urology for years. Another five or six had worked in the pediatrics outpatient clinic.

"Yes, we had nurse practitioners early on," says Hunter C. Leake, III, M.D., director of pediatric ambulatory services, "but they were being used in a helter-skelter way. There was no real team work, and the nurse practitioners couldn't count on any particular physician."

A tall, energetic man in his late 30s who clings to his soft New Orleans drawl, Doctor Leake was encouraged by the new chief of pediatrics, Burton A. Dudding, M.D., to completely revamp the outpatient program. Five full-time attending physicians, all of whom are on salary, were teamed up with five nurse practitioners. The teams work with four-year residents in pediatrics who, for six months, spend half their time in the clinic.

"Usually, if you're a clinic patient anywhere, your doctor comes and goes," Doctor Leake goes on. "You never know who you're going to see. Continuity of care is sporadic to say the least. We have changed all that by organizing what we call the University Pediatric Group, designed like a private practice group.

"We see 900 to 1,000 patients a month—a varied bunch—with some of them able to pay and about a third covered by some kind of insurance. Each patient is assigned to a particular nurse-physician practitioner team. If a mother has a question about her baby's health, she calls that particular nurse practitioner. The practitioner can make a clinic appointment for her or, if necessary in the middle of the night send her to the emergency room, where a resident will take care of the child until the attending man can get there."

Doctor Leake explains that the five nurse-physician teams take turns being on call nights and weekends. "All after-hours calls are routed by an answering service to the on-call nurse practitioner. If the problem is minor, she simply handles it over the phone. A child with a little diarrhea and a low grade fever who is eating O.K. might be taken off milk and solid foods, for example, and put on clear liquids, such as Coca Cola or ginger ale. If the problem seems more serious, the nurse practitioner calls the doctor, who might decide to see the kid right then and there in the emergency room."

The nurse practitioner that Doctor Leake had been teamed up with resigned at the end of 1974 to have a baby. Linda Witcher became her replacement. On Monday mornings, Mrs. Witcher is usually found on the second-floor obstetrics ward inside the new-baby nursery. Here she looks over the charts of the babies, born over the weekend, who will be her patients in the clinic.

"Sometimes I come across a problem," she says. "Last week, I had to

look at a cavernous hemangioma on the back of a newborn. The parents wanted me to see it. Well, five pediatricians had already looked at it, but the parents knew I'd be taking care of the child, so I looked at it too. Then I called Doctor Leake, who said it might possibly go away by itself, but he promised to look at it too."

Mrs. Witcher is on her way to see a patient as she talks. Inside a three-bed room, she visits a 19-year-old woman who has just had her first baby. She is briskly pleasant with her: "Hi, I'm Linda Witcher, a nurse practitioner, and I hear you're going to bring your baby boy to the clinic. I'll be working with you."

Mrs. Witcher quickly learns that the new mother has no baby bottles. "The hospital will give you a couple, and you can buy four more at the grocery store. You're going to use a commercially prepared formula? Well, you can buy it ready-made, but it costs twice as much as the concentrate, and that's a big price to pay. No, you don't have to sterilize the bottles or boil the water. Just be sure to wash your hands well.

"The baby's weight is 7 pounds 11 ounces, and that's average size, so don't overfeed him, don't try to push his bottles up to seven or eight ounces. And don't give him any cereal until I see him at the clinic."

Mrs. Witcher makes a clinic appointment for a month hence: "If you have any problems, call *me*. Don't come into the emergency room or clinic; call *me* first. Even at night, you can obtain help by calling the answering service." She gives the mother a card with several telephone numbers. "If you really need help at night, don't hesitate to call. . . . No, his circumcision probably isn't hurting him any more."

Downstairs, Mrs. Witcher sees children in the clinic on the same schedule as Doctor Leake and his pediatric resident—afternoons on Monday, Wednesday, and Friday; mornings on Tuesday and Thursday. Usually, with the well babies, she does not have to call on the physicians for help. Her first patient today is a handsome little boy born five weeks earlier. His 20-year-old mother wears blue jeans.

"Is there anything on your mind about the baby?" Mrs. Witcher asks. The mother says the baby's eyes have some drainage. "We'll look at that but it's common in newborns." Mrs. Witcher asks the mother a series of questions: "When you were pregnant were there any problems? You say too much weight gain? Did you have any bleeding or fainting spells? Was the delivery normal? Did you need any blood? You're breast-feeding? That's good! Did the baby turn yellow in the nursery?"

An aide has already weighed the infant. "He's gained two pounds. That's normal—we look for babies to gain an ounce a day . . ."

The baby's bowel movements are discussed, exhaustively: Color, frequency, degree of looseness. "Does he seem to hear noises? Does the baby's father live at home? Is he working nowadays? Good."

Mrs. Witcher learns that the young mother earns extra money by caring for two small children in her home while their mothers work, so she "knows all about babies." Nevertheless, Mrs. Witcher gives her a leaflet that points up the need for babies to have a safe, approved car seat.

"Does the baby have his own room? Good! How old is your mother-in-law? Forty? Does *she* have any problems such as TB, diabetes, kidney problems, high blood pressure?" Mrs. Witcher questions her a moment more about the family. She asks if the child's grandparents take any kind of medications.

With the exhaustive history-taking done, Mrs. Witcher begins an equally exhaustive physical examination of the baby. With her stethoscope, she listens for bowel sounds and for the normal sounds in the chest. Carefully, she feels for abdominal masses and sees if she can palpate a kidney or feel the spleen. For a whole minute, she rotates the tiny thigh bones in their sockets, making sure they are firmly seated. With a little flashlight, she aims a light beam at the eyes to see if the pupils are the same size and to watch how they react to the beam. She looks but there is no redness on the whites.

"Yes," Mrs. Witcher says, "what he has is a little bit of closure of the tear ducts. See how I push down with my fingers under his eyes alongside his nose? Do this a couple of times a day and it'll open them."

Turning to the neck, she probes for nodules and lightly runs her hand over the still-open anterior fontanels atop the baby's head. "See this? He's gotten a little bit of cradle cap or seborrhea as they call it. You must shampoo. And wash his eyes out every day. If they keep on running, we'll do a culture on them. Call me in two weeks and tell me how his eyes are doing." She notes that the baby tries to "walk" when she holds him atop the examining table; it is the normal "stepping reflex."

"Give him only a little bit of cereal," she advises. "And make it rice cereal. Rice is less allergenic. Express a little bit of milk from your breast to moisten the cereal."

She makes an appointment to see the mother in another month and hands her a booklet on baby feeding. On a printed slip, she checks off the fee that the patient must pay—$10—the same fee that would have been charged if the baby had been seen by Doctor Leake. The billing is done in the name of the University Pediatric Group. Actually, it's a bargain. Mrs. Witcher has taken 38 minutes for this extraordinarily thorough examination. "We nurse practitioners use a lot of time, compared to doctors."

As the patient leaves, Mrs. Witcher writes "lacrimal dacryostenosis, bilateral" on the chart and places it in Doctor Leake's mailbox in the conference room used by the teaching staff and medical students. The

physician will check over the chart to make sure everything is in order.

The next examination goes much faster. Mrs. Witcher has called a mother and her eight-month-old boy in because he is below the tenth percentile on the weight gain chart, and she is worried about him. The mother's babysitter told her on the phone that the mother didn't leave behind enough food when she went off to work.

Doctor Leake has marked "Excellent!" on the chart opposite where Mrs. Witcher has recommended seeing the boy within a fortnight instead of waiting five months for his regularly-scheduled visit. But today the news is good. The weigh-in shows that the child has gained 15 ounces in two weeks. "You've been feeding him a little more, haven't you?" Mrs. Witcher asks approvingly. The mother nods her head. "Okay, I'm glad you brought him in. It shows you care."

With the next patient, Mrs. Witcher has to call for help. Her patient is a plump nine-month-old boy, named James. His mother stares, uncomprehending, as Mrs. Witcher says she may have been feeding him too much. "Fifty-six ounces of milk a day is a tremendous amount," Mrs. Witcher tells the mother. "When the baby cries, he isn't always in need of a bottle. If you fed him recently, play with him instead of feeding him again. We now have reason to think fat babies are often the ones who become fat adults." Mrs. Witcher orders a hemoglobin and a hematocrit, suspecting anemia because of the child's feeding habits.

The appearance of the baby's ear drums prompts her to summon the resident to the examining room. "Mike," she says, "I'd like you to look at this. (All the physicians and nurse practitioners use first names.) The resident, Mike Torrence, M.D. scoops some wax out of the ears with a curette and looks inside. "They're pretty red, Linda," he says. "I'd go ahead and put him on antibiotics for 10 days." He writes a prescription for antibiotics and also prescribes a decongestant.

"Would you please feel his neck, Mike, and describe what you're feeling?" Mrs. Witcher asks. Doctor Torrence obliges, and the baby starts howling. "A few nodes, that's all. They go with the cold." Mrs. Witcher thanks the young physician as he leaves. He has spent four minutes with the patient; she has spent about 40.

How does Doctor Torrence like working with nurse practitioners? "I'm really impressed with them," he says. "When I go into private practice I intend to take a couple along with me. They'll really be great in an office practice. They can get rid of a lot of the phone calls and they can take care of the parents who have to be talked to longer."

Picking up the phone, Mrs. Witcher asks the clinic secretary to reschedule two of her appointments next week. She and another nurse practitioner have been invited to a luncheon, sponsored by a dairy group, to hear a Harvard University nutritionist speak. She smiles as she

says: "I couldn't be doing things like that if I were a staff nurse in a more rigidly structured job. I appreciate this independence."

Mrs. Witcher is a teacher and is proud of it. Twice a week, a third-year medical student is assigned to work under her. "I try to give the students information they're not likely to know at first," she says. "Like the consumerism stuff about what brand of baby food has iron—the major problem of children under two years is iron deficiency anemia." One of the students, James Winblad, walks by. He says: "I enjoy working with Linda. She's a darn sight better teacher than some of the residents."

"Our relations with the doctors are really unusual," she says. "They're completely different from those anywhere else I've worked. The doctors here ask *our* opinion about patients and patient management."

Back in an examining room, Mrs. Witcher has to call on a physician for help once again. A worried working mother has brought in her six-year-old daughter, who complains of itching caused by an odd-looking rash that is distributed in a random pattern over most of her body. "Have you changed laundry soap recently?" Mrs. Witcher asks. The woman says she washed clothes at her mother's house, using a strange soap. But she did it only once and that was two weeks ago.

However, the mother offers an interesting clue. The child had been playing with a new puppy "whose hair was falling out so bad we had to get rid of it." Mange? Mrs. Witcher goes out to the conference room to consult a book on dermatology. The tiny parasitic mite that causes mange in dogs is not unlike the mite that causes scabies in humans. Some physicians believe they can infect humans. Mrs. Witcher asks the resident if he can look at her patient, but he is busy so she calls Doctor Leake.

"Hmmm," Doctor Leake says as Mrs. Witcher offers her diagnosis. "I can't buy that, Linda. The lesions are too punctate. It looks more like molluscum contagiosum, a viral disease that is self-limited; it comes and goes. Actually, the child's scratching is therapeutic for this disease." To be on the safe side, just in case Mrs. Witcher's suspicions are correct, Doctor Leake scribbles a prescription for Kwell, a drug that kills scabies mites.

Sometimes Doctor Leake and Mrs. Witcher see patients together. This morning they have a worrisome case. A young, handsome couple comes in, carrying their beautiful, month-old daughter. The baby had been born, nearly four weeks premature, just after the death of the couple's only child—a 14-month-old boy, who had been born brain-damaged. The child could neither see, nor hear, nor coo for all of his short life. Toward the end he became hydrocephalic and lost his ability to swallow.

Doctor Leake listens while Mrs. Witcher talks to the couple. He joins in to offer some advice on breast-feeding: "Drain one breast completely before going to the other," he says. But his real concern, which is hidden from the couple, is something else. There was too little time, he fears, for the couple "to work through the grief process" between the time of their son's death and their daughter's birth. In cases like this, parents are not always able to welcome a new baby.

"Bill, do you have time to play with Sarah?" Doctor Leake asks the young father, noting approvingly that he is holding the child while they talk. "That's awfully important and I'm glad to hear that you do that. In this culture too many fathers say, 'Okay, you've got them until they're six-years-old, and then I'll play with them.' Not just gootchy-gootchy-gooing, but diapering, feeding, and above all, talking. Eye contact is very important. Get her to fixate on you."

The mother hesitates, then says: "I didn't talk to Jeremiah because he couldn't hear me, so what was the point of it?"

Usually, Mrs. Witcher is concerned about new mothers getting "cabin fever" because they are tied to their houses. This sometimes results in child abuse cases, so she invariably encourages mothers to hire a baby-sitter and go out to dinner and the movies or whatever they want to do. To this mother she says, "In any event, you should get the baby used to taking a bottle so you can go out and leave her with a sitter in case of an emergency."

Doctor Leake leaves Mrs. Witcher alone with the parents and the baby to do the physical examination. While she works, Mrs. Witcher makes approving comments about how healthy the baby seems. The young mother seems to value the reassurance. "How is her head size?" she asks anxiously as Mrs. Witcher measures the skull circumference with a paper tape measure. Mrs. Witcher makes a reassuring sound.

"Maybe I'm a nervous mother," the young woman says, "but I don't hesitate to call Linda a couple times a day—sometimes to ask questions that I wouldn't ask Doctor Leake. Everybody does."

Later, in the conference room, Doctor Leake makes a point about the interaction of the physician and the nurse practitioner in a joint practice:

"Our nurse practitioners are adamant about being nurses. They didn't come here to be physician's assistants who are, in many respects, merely technicians. A physician directs the assistant to perform certain activities. You use protocols with physician's assistants. We have none for our nurse practitioners. Our nurse practitioners don't want to be dependent on a physician all the time for all their activities. They don't want to give up their nursing role, but they want some of the responsibilities that have, classically, been the physician's turf. But they also perform their traditional roles of patient and parent education.

"Personally, I've got no hangup about 'roles.' For example, I was called to the emergency room one night to see a baby with colic. The mother had telephoned the nurse practitioner three times that night, until the nurse finally called me and said: 'Hunter, I've got a *nursing* problem for you. I've gone over that child previously, from head to foot, and there's nothing wrong. So go put on your long, white coat and tell this mother what I've been telling her all evening.'

"I examined the child and counseled the mother for 30 or 40 minutes on how to deal with colic—explaining that we didn't know the etiology, but that it lasts for three months and then subsides. Now, was I being a nurse, when I was talking to the mother? I have no problem about regarding myself as a nurse. A lot of nurses do a lot of doctoring and some doctors do a lot of nursing.

"I get angry when someone talks about the role of the nurse practitioner. We don't have roles here—we have positions. We fluctuate within these positions, depending on the hierarchy of patients' needs. Usually, a nurse handles colic, but I came into the case when the patient needed me. If we had rigid roles I would not have been able to meet basic needs."

Despite Doctor Leake's sensitivity to the feelings of the nurse practitioners, he admits to some mistakes. "For example, I volunteered their services to conduct some Head Start EPSDT screens (early periodic screening, diagnosis, and treatment) of underprivileged children. Unfortunately, the kids they were screening had so many problems that the nurse practitioners just couldn't do justice to them in the 10 or 15 minutes allotted. There was a lot of slamming of charts on tables. The clinic got $10 for each screen. The nurse practitioners referred to this as ten-dollar piece work. I went to the nurse practitioners and apologized. Our solution was to hire a woman doctor to work part-time in the clinic and utilize medical students for the exams under her supervision. This has worked out very nicely."

The open atmosphere of the University Pediatric Group seems to head off problems before they become acute. For awhile, some of the attendings would disappear during clinic hours and the nurse practitioners couldn't find them. But after just a few complaints, the attendings began leaving a telephone number if they were going upstairs to an office. This made them instantly available.

In the interest of better communications, Doctor Leake and Mrs. Witcher meet in his office at 4:00 p.m. every Friday for an hour of talk. "It's not solely conversation about patients; it's getting to know one another," says Mrs. Witcher. "I'll ask, 'What's your routine for handling discipline, what's your thinking about feeding?' Then I'll tell him how I feel. Once we talked about how we had held different opinions

about a certain patient and then had discussed our differences right in front of the patient. We agreed that it was O.K. in this case, because the patient was sophisticated, but that we had to be careful not to upset someone else by talking like that."

By and large, the patients are happy with the way they are treated. "A few of them will call in and say they want to be seen by a 'real doctor,' and not a 'nurse,' but they are the rare exceptions," says Mrs. Nancy Lister, a bright young woman with a master's degree in public administration, who is the clinic manager. "Most families realize that this system gives them more time to spend with the doctors. People obviously must like it, because the number of our patients has doubled since the University Pediatric Group was established."

But Mrs. Lister has her own criticisms: "The nurse practitioners write too much—they write volumes—they leave nothing out of a history. And they take quite a bit of time with a patient, seeing only one an hour. That just about pays their salaries and nothing else. That's why I'm not sure if this model would work in a private practice setting. The nurse practitioners are not trained to give assembly line services, and many private doctors might expect them to see many more patients."

Burton A. Dudding, M.D., chairman of the department of pediatrics disagrees, saying: "I would much rather have two nurse practitioners working with me than a partner. They free the physician to recognize and treat diseases and to handle problems."

Doctor Dudding works in the group practice also. The nurse practitioner he is teamed up with, Georgia Crouch, is a graduate of the Medical Center's practitioner program and has worked at the clinic for two years. "It took about a year and a half before we felt completely comfortable with one another," Doctor Dudding says. Mrs. Crouch laughs. "More and more I ask him less and less about the problems that come up." With the passing of every month, she is more on her own.

The Dudding-Crouch relationship is completely open. "Georgia caught me telling a patient some myth I had learned as a young resident, that a breast-fed baby needs water to wash out its system after jaundice," Doctor Dudding says. "Nonsense! Georgia argued with me and won."

Doctor Leake is even more vehement than Doctor Dudding about the value of nurse practitioners in private practice: "What does a well-trained pediatrician see when he first opens an office? He doesn't see acute renal failure, meningitis, and leukemia. He sees snotty noses and colic, as well as learning disabilities and behavior problems and school problems—troubles for which he is completely unprepared. A nurse practitioner can free him and help him manage all these things that, currently, he's not managing. As for benefits to the doctor, last weekend Linda took 30 calls; I got only five.

"I think that the younger men—those under 35—will be eager to hire nurse practitioners. But I anticipate resistance from older physicians. One of them told me: 'We won't hire nurse practitioners. We don't want to give up the intimacy of dealing with a patient.'"

Like all nurses at the center, the nurse practitioners buy their own malpractice insurance. So far that insurance has been reasonably priced because they don't get sued. And one reason they don't get sued, probably, is the warmth with which they deal with their patients. The warm patient relationship that is absent from so many public clinics is very much present at this one.

Mrs. Witcher is still seeing patients. Her next is a small nine-month-old infant. Mrs. Witcher delights the little patient by playing peekaboo with him as she administers a Denver Developmental Screening Test. "Play like this with him," she tells the young mother. "It may help him to understand that when you go away, you'll come back." The mother has brought a three-year-old boy along, and the nurse practitioner delights him by giving him a rubber ball.

Mrs. Witcher looks thoughtfully at the mother—so young at 19 to have two small children. "Remember the last time we talked, you told me that you would like to get a job—that you felt trapped in the house—but that you had no skills?" she asks sympathetically. The mother nods her head vigorously. "Well, I've talked to the clinic social worker and she thinks she can help you," Mrs. Witcher says. The woman looks surprised and pleased.

If a parent neglects to bring a baby in on schedule, Mrs. Witcher will telephone or write her. If she is particularly worried about a mother or a child, she will make a house call.

Doctor Leake says that Linda does social work that is invaluable in ruling out child abuse. "We had one ten-month-old girl in here whose mother said she saw blood on the diaper as well as blood coming from the nose. The stools were positive for blood. The mother thought the two older siblings had struck the baby with a toy. I was suspicious. You can't get rectal bleeding from that, so I assigned Linda to the case to find out how the family functioned as a unit—who did what to whom, what kind of child-rearing practices were followed. Linda concluded that the mother was *not* a risk. That was a *big* relief."

"I can't praise Linda enough in the area of child abuse," says Doctor Leake. "When I identify a mother with cabin fever, I'll tell Linda who will maybe call her daily on the telephone or make regular visits. Maybe she'll encourage the mother to figure out ways to get out of the house. Often, the mother will say, 'I can't afford a babysitter,' and Linda will sometimes reply, 'A babysitter is cheaper than a psychiatrist.'"

J.S.

HOPPY AND DOC

When a patient of James B. Johnson, M.D., of Greencastle, Indiana, telephones for an immediate appointment, he is likely to be told by the receptionist: "Doc can't see you now, but Marilyn Hopkins can see you right away. Ms. Hopkins is our family nurse practitioner." Many of the callers have been Doctor Johnson's patients for two or three decades, and a few of them are understandably reluctant to be seen by anyone else. The overwhelming majority, however, do not seem to mind the new arrangement. Some patients are even beginning to ask for Ms. Hopkins.

Greencastle (pop. 8,500) is a pretty college town, the home of DePauw University, some 35 miles southwest of Indianapolis. It is a marketing center for rich farmland (corn, soybeans, dairy products, beef), and it also has an IBM computer card plant (with 900 employees), a Lone Star cement plant, a Mallory capacitor plant, and a limestone quarry.

The medical force of Greencastle and vicinity consists of a part-time radiologist, part-time pathologist (both of whom commute from Terre Haute), an internist, two general surgeons, and eleven family practitioners. Doctor Johnson, one of the family practitioners, is, at 60, an unusual man with an unusual background.

Doctor Johnson was born in China, the son of Methodist missionaries. His parents raised their five children in Kiangsi Province, where they operated a mission school. As a teenager, Doctor Johnson rode a steamboat 500 miles down the Yangtze River to attend a boarding high school in Shanghai. After high school, Doctor Johnson came to Greencastle to go to college. Then he attended Case Western Reserve University School of Medicine. To help support himself, he waited table at an old people's home. In his third year, he married. His wife, Martha Ellen, who has a master's degree in nursing, is a Greencastle native.

After an internship in Cleveland, and with the outbreak of World War II, Doctor Johnson served for 21 months overseas—North Africa and Italy—as an Army Air Corps flight surgeon. He participated in eight combat missions, had to parachute down into Yugoslavia, and was awarded the Air Medal. He still flies occasionally, and as half owner of a single-engine plane, has accumulated 520 hours of flying time since he

was licensed in 1947.

When he was discharged from the service it seemed natural to Doctor Johnson and his wife to set up practice in Greencastle. Doctor Johnson soon had a thriving practice and, over the years, became active in the Indiana State Medical Society, serving as chairman of its Commissions on Public Health, Medical Education and Licensure, and as the society's representative on the state's Joint Practice Committee. He and his wife raised a family of two girls and two boys—one of whom is taking a family practice residency in Wisconsin—and participated in church activities.

"I suppose it's my missionary blood," Doctor Johnson says, "but I've always had a concern for people." One of his concerns is that not everyone in America has the same access to medical care. That made him receptive when he first heard of the nurse practitioner concept. He saw it as a way of providing for people who might not otherwise be getting medical care. "Some doctors feel that I'm 'too liberal,' that I'm a little 'far out,' a little dangerous." He smiles at the thought. "But a lot of people need help, and they won't get it if we go on doing things the way they've always been done. Too many doctors just don't want to change."

In late 1973, Doctor Johnson told the administrators of a new nurse practitioner training program at the Indiana University Medical School in Indianapolis that he, himself, might not be averse to taking on a nurse practitioner. They were happy to oblige him, and early 1974, he hired Marilyn (Hoppy) Hopkins, a graduate of the Indiana program, at a salary of $14,000 a year.

Hoppy Hopkins, a plump grey-haired woman in her early fifties, grew up in a small town in Southern Indiana, but after taking her nurse's training at the Norton Infirmary in Louisville, Kentucky, her career led her to many parts of the world and a wide range of nursing and administrative positions. She returned to school to receive a master's degree in education administration from Teachers College of Columbia University, accepted a three-year appointment at Wayne State University, Detroit, Michigan, as assistant chairman of the basic baccalaureate degree program in the College of Nursing. Then a Rockefeller Foundation grant made it possible for her to tour Europe, visiting nursing schools.

Returning to America in 1962, Ms. Hopkins became chairman of the basic degree program at the Syracuse University School of Nursing. Her parents became ill in 1966, and she returned to Indiana to be closer to them. She joined the Indiana University School of Nursing as chairman of a department called Advanced Nursing and Management of Nursing Care. Time passed. Ms. Hopkins' flourishing career suddenly

palled on her.

"I had been working as part of a complex associated with universities and medical centers, and in good-sized cities," she says. "I decided that I had to get back to grass roots. It seemed to me that I was not in the real world—that priorities were distorted. I wanted to get back in practice and be more personally involved in health care delivery than I was as an administrator and teacher."

The nurse practitioner program at Indiana University seemed to be the answer to Ms. Hopkins' problems, so she joined the second class to be organized. It had in it 19 women and three men. A federal grant covered Ms. Hopkins' tuition for the six-month course. The government also paid her a monthly stipend of $200 for living expenses.

"For three months, I went to class from 8:00 a.m. to 5:00 p.m., and then I went home to study for another four hours," says Ms. Hopkins. "I attended lectures in medicine, surgery, pediatrics, obstetrics-gynecology, dermatology, psychiatry, and neurology. We had selected patients for history taking and physical diagnosis.

"My last three months were completely clinical. I spent them working in preceptorships in private offices—a family practice preceptorship in Richmond, Indiana and a pediatrics preceptorship in Bloomington, Indiana. I spent my two weeks of elective time in an emergency room, passing up the bad auto accident cases for the kids who had split their lips playing baseball, because I knew that this is what I would be handling—not auto accidents."

After her graduation in late 1973, Hoppy sent resumés, a few at a time, to a total of 20 different physicians. "I got the courtesy of a response from only one of them," says Ms. Hopkins. "Others in my class had the same experience." The doctors were still suspicious of the nurse practitioner concept.

Then, finally, she heard of Doctor Johnson's interest in hiring a nurse practitioner, and she drove to Greencastle to see him. "I liked him immediately," she says. "I liked his sense of humor, and I liked his honesty." These reactions were mutual, and she was hired.

Ms. Hopkins leaves her one-bedroom apartment in Greencastle at 7:55 every morning for the five-minute ride to Putnam County Hospital, where she visits patients. The hospital has 85 beds and, for a small town, excellent equipment. "My first year with Doc," she says, "I was examining patients after they were admitted, taking histories, and dictating histories for the chart. I also gave patients the more complete discharge exam and dictated the formal discharge summary."

About a year after Ms. Hopkins moved to Greencastle, Putnam County Hospital was temporarily without an administrator. At that time the director of nursing felt compelled to ask for a written summary of

qualifications necessary for a nurse practitioner's job and also of a practitioner's hospital responsibilities and privileges. Doctor Johnson and Ms. Hopkins readily complied. The Johnson-Hopkins statement was then submitted to the hospital's attending staff for the physicians' approval. They voted five to four not to give Ms. Hopkins privileges.

"They had nothing against me," Ms. Hopkins says, "but they regarded the nurse practitioner concept as an invasion of their profession." Doctor Johnson believes some of the local physicians were afraid that Ms. Hopkins would compete with them. "Also," he says, "the physicians are being pushed by PSROs, and they're having to do things they don't like. There's been too much change for them," he adds, "and here was one change they could vote down."

So, biding her time, Ms. Hopkins helps Doctor Johnson at the hospital all she can. Today, making rounds, Ms. Hopkins sits down at a table, where four physicians are working on their patient's charts. They pay little attention to her as she scans her own charts and then sets out down the hall with a doctor's black bag in her right hand.

Entering the room of a patient who has been suffering from a persistent weight loss, she tells him: "Doc is upstairs delivering two babies at once. But he'll be along as soon as he's done. I think his plan is to let you rest and to do some more tests to make sure there isn't anything else wrong besides your ulcer." Leaving the room, she writes on the man's chart: "Rested today. Appetite good. Verbalized his thinking about the source of his emotional problems in regard to work." She signs the notes with a flourish: "M. Hopkins, R.N., F.N.P."

"When Doc isn't busy," Hoppy says, "not like today, we may see some patients together, examine them together, and talk over their progress and review new lab data. We also review the nurses' notes. Doc feels that they usually contain helpful information. If they don't, he makes his displeasure known. It's good for me to follow up on the patients I see in the office, and it's also a good learning experience for me. I say, 'What does this mean?' or 'I don't know anything about this,' and Doc stops and explains it. He's always ready to explain."

On the maternity floor, Ms. Hopkins visits a young dark-haired woman who had a baby the previous night, but had not yet seen it. "Is she O.K.?" the mother wants to know. Hoppy can't really answer, for she hasn't seen the baby. "Doc checked her out at birth, and he'll check her out again when you're both discharged, probably tomorrow or the next day," she tells the woman. Then she talks to her for a few minutes about the care and feeding of newborn babies.

In the intensive care unit, Ms. Hopkins examines a young woman who had a complete hysterectomy after suffering a pelvic abscess and peritonitis. "It sounds just like a tinkle!" she says, listening with her stetho-

scope on the abdomen and hearing the resumption of bowel sounds. "It's wonderful how you're doing! I see you walked in the hall at 5:00 a.m. and sat in a chair at 5:30 a.m. That's terrific!"

The wan young woman asks about the extent of the surgery. Ms. Hopkins reads through the operative notes and evades the question. "The surgeon and Doctor Johnson will talk to you about it," she says.

Nearby, she examines a snoring, unconscious teenager, admitted earlier in the day after apparently taking 25 Librium tablets. His pupils are pinpoints. She examines the youth and writes on his chart: "8:45 a.m. Pupils pinpoint. Color good. Skin warm and dry. B.P. 110/82. Pulse 84. Respiration 20."

As she finishes, Doctor Johnson comes in from the delivery room, where he has just delivered a baby girl. He is wearing a baby blue scrub suit. He looks at the youth. "He's responding very slowly to pain stimuli, maybe ten seconds later; autonomic pain, not somatic," says Doctor Johnson. "I'm going to catheterize him."

After rounds, Doctor Johnson leaves for an hour or so at his job as the part-time plant physician at IBM and Ms. Hopkins leaves for the office—a five-minute drive away. The office is in a handsome, one-story fieldstone building that has separate sections for Doctor Johnson and for an internist-neighbor he sometimes consults on difficult cases. There are three other two-physician buildings in the complex and a pharmacy, owned by a corporation in which Doctor Johnson is one of the three principals.

Inside, Ms. Hopkins is greeted by the receptionist and the office nurse. The nurse, Judy Albin, has been with Doctor Johnson for 17 years. The nurse practitioner's relationship with both women is warm—as evidenced by their asking her to do their annual pelvic examinations. Mrs. Albin gives Ms. Hopkins the same type of office assistance that she gives Doctor Johnson—drawing blood, recording height, weight, and pulse, giving shots, and doing laboratory work.

Today's office schedule, a sheet of bond paper, divided down the middle, lists names on the left—patients for Doctor Johnson to see—and names on the right side—patients for Ms. Hopkins. There are ten names on her list. More names will undoubtedly be added as the day progresses.

"I'm much slower than Doc," Ms. Hopkins says. "For a complete exam, I'll take a full hour and still have the paperwork to finish. Doc allows himself 45 minutes and often doesn't use all that time. I allow 30 minutes for the usual gynecological exam, while the receptionist allows Doc 20 minutes when making up the schedule."

After more than a year, Ms. Hopkins is beginning to attract patients who ask for her—mainly women who formerly had been seen by the

town's only woman physician, who recently retired. "I also see many patients coming in for routine physical exams (annual physicals, insurance physicals, college physicals, general school physicals, pre-employment physicals, sports physicals, and exams required by state law for drivers over 70)," says Ms. Hopkins.

"Most of the men don't seem to mind being examined by a woman—my grey hair helps. Recently, I diagnosed and treated gonorrhea in a 17-year-old boy and he didn't seem a bit embarrassed. Whatever patients I see, I try to alternate with Doctor Johnson, so he can see them too. These are Doctor Johnson's patients. Most of them seem to understand when he's too busy for him to see them, but I suppose that a few resent it. They may not say anything, but it's quite apparent from their manner. They're not relaxed and at ease; they don't volunteer information. They'll give indications like 'Doctor Johnson understands my case.' When that happens, I'll have the receptionist make a note on the chart that the patient should in the future be scheduled to be seen by Doctor Johnson.

"I see many acute minor illnesses. But if someone comes in with heart attack symptoms, and Doctor Johnson isn't in the building, I send them to the hospital emergency room. Most accident victims go to the emergency room on their own. What I see a lot of is bronchitis, croup, otitis media, infectious mononucleosis in kids, and lots of colds. I see minor injuries, such as twisted elbows, scraped knees, twisted ankles. I send some of these patients over to the hospital three blocks away for an x-ray and have them come back with it. I see lots of vaginal bleeding. I also see some of the stabilized, chronically-ill diabetics and hypertensives."

The delicate line for the nurse practitioner is to know what she does not know. Hoppy knows. She says: "If I'm unsure, I'll ask Doc to recheck the patient. If he doesn't have time that day, I'll ask the patient to please come back tomorrow—and we thank them for bothering—and there's no extra charge."

There are some days that Ms. Hopkins does not have to consult with Doctor Johnson even once. On other days, she may have a question about every patient. "Sometimes I ask him to repeat a part of an exam—checking a galloping heart sound, a lump in the breast, an enlarged uterus, a mass in the abdomen," says Ms. Hopkins. "These are all potentially serious things, and here I think there should be physical confirmation and consultation. That is where you move out of the realm of the nurse practitioner. It's doctor business."

Doctor Johnson says: "I pretty well take Hoppy's evaluations. She's not often wrong. I can trust her observations. Some doctors feel the necessity for supervising 100 percent. I don't. Where I help is with my

experience."

Today Ms. Hopkins' first patient is a very hypertensive woman, who requires a routine look at her blood pressure. But the scheduled five-minute session turns into a 60-minute session. The woman's blood pressure is still not responding substantially to the prescribed medication and she begins to pour out her worries to Ms. Hopkins: She is afraid, for some reason, that her teenage son will become an alcoholic.

"He's developing fast, likes excitement, and doesn't know much about sex," she says. She fears he will become involved with a young girl and have to marry prematurely in the next few years. She is also worried about her teenage daughter, who "looks placid but underneath has a storm. I don't want to go through with her what I went through with my oldest child. And she can't talk to me about her problems."

It is a marvel to Ms. Hopkins "that people will reveal their most intimate and sacred secrets, once they see I have the ability to listen. So many patients have emotional aspects to their illnesses. I may play 'I'm okay, you're okay.' It's challenging and sometimes overwhelming. You're on the line every minute."

At the end of the hour, she gives the woman a pamphlet on alcoholism for her son to read and makes an appointment to talk to her daughter. The woman says her daughter likes and trusts Ms. Hopkins and would probably be willing to talk to her frankly. Ms. Hopkins also offers to talk to her son "and if he doesn't want to talk to me, I'm sure he'd be willing to see Doc."

As for the elevated blood pressure, Ms. Hopkins decides to continue the drugs the woman is taking for another month, until she can be checked again. "It's little wonder," she confides, "that the woman has had high blood pressure, when you listen to all that she's worrying about."

The charge for the woman's office visit is $8, a bargain considering the time involved. It's the same as that charged by Doctor Johnson for an office consultation. Ms. Hopkins also asks the office nurse to give the farmer's wife $1 worth of antihistamines to help the woman's cold symptoms. Like many country practices, Doctor Johnson's office still dispenses a few drugs. If a prescription has to be written for a patient to take to a pharmacy, Ms. Hopkins writes it and signs the physician's name.

Doctor Johnson has returned to the office from his job at IBM, but Ms. Hopkins does not need to consult him about the next patient. The patient is another farmer's wife who suffered a poison ivy rash on her ears after mowing the yard. Hoppy tells her it might be a good idea to get a preventive shot later, when her present attack is over, in view of the fact that she is so allergic. "For now I'm going to give you these

cortisone cream samples," she says. "They're good for crusty, weeping lesions, and they'll stop the itching. They're expensive, so there's no point in buying some when we have these free samples."

While discussing the first two patients of the day, Ms. Hopkins is asked: "When are you a nurse and when are you a medical practitioner?" She answers: "It's all in your state of mind. The data I gathered from the first patient was useful in assessing her problem. That's a nursing function. I suppose that what I did for the girl with poison ivy was a medical function."

Between patients, Ms. Hopkins takes time to make telephone calls. "We notify people in this practice, regardless of what their tests show," she says. "Some doctors report only positive findings." Over the telephone, Ms. Hopkins tells a patient's wife that the x-rays show he doesn't have emphysema, but the nurse practitioner promises to have a stern talk with him about his heavy smoking.

Next, Ms. Hopkins sees a pregnant woman, here on her first prenatal visit. Doctor Johnson has delivered her three other children. The office nurse has already taken some urine and some blood for a complete blood count and serology. And she has calculated the due date, four months in the future. Hoppy takes a careful history. The woman is inclined to gain weight during a pregnancy, so she cautions her: "You need fruits and vegetables and more milk than you're drinking. Three glasses a day would be ideal. The baby draws the calcium it needs from your bones and teeth, making it necessary for you to drink more milk."

In questioning patients, Ms. Hopkins is generally guided by a type of protocol, which was Doctor Johnson's idea. It is the Flow Chart Service, a thick, brown, looseleaf notebook, published by *Patient Care Magazine*. Flipping to the chart appropriate for a particular illness or condition, she can make sure she asks the right questions for the particular symptoms described. The flow charts also offer standard treatments.

Birth control counseling is one of Ms. Hopkins' frequent chores. A newly-married woman of 18 claims the birth control pill she has been taking is no good because of breakthrough bleeding. In the course of the conversation, the nurse practitioner discovers that the husband's conservative family "doesn't believe in such things as birth control."

Patiently, Ms. Hopkins shows the patient what a diaphragm looks like and describes the relative safety and efficacy of the I.U.D., the condom, and spermicidal creams. She also discusses the rhythm method with her. The young woman is reluctant to make a decision. "I have to talk to my husband first," she says.

"Whatever method you choose, we'll be willing to help you," she

isn't it? Well, it's a good chance for you to work out a significant problem together. It's a sign that the honeymoon is over."

The next patient is a woman of 34, who has come in for a pap smear and a pelvic examination. Ms. Hopkins has developed considerable skill with pelvics. "For one thing," she says, "being a woman, I don't appreciate a cold speculum, so I always warm the one I'm using with some hot tap water."

Doctor Johnson repeats that Ms. Hopkins is not often wrong with diagnoses. "If she doesn't know something," he says, "she'll tell the patient: 'Let's see what Doctor Johnson says.' She's not interested in impressing patients. She's interested in giving good service, not in being an important person. She isn't a doctor and doesn't pretend to be a doctor." This last is interesting, because one of Ms. Hopkins few vocal critics, a nurse at the hospital, likes to tell friends: "If Hoppy wanted to be a doctor so bad, why didn't she go to medical school?"

Besides working in the office, Ms. Hopkins makes routine monthly visits to patients in the town's three nursing homes. "The receptionist makes up a list of the patients who have to be seen," she says. "We note who saw the patient last and then we try to rotate for the next call. That doesn't always work, and I'm usually seeing patients more often than he does. We deal with very complicated emotional problems, orthopedic problems, surgical problems, and problems about self evaluation. I get very incensed—many doctors don't see their patients frequently enough after they go into a nursing home."

Ms. Hopkins and Doctor Johnson talk over all these cases. In the event of an emergency call from a nursing home, Doctor Johnson is more likely to answer it, although Ms. Hopkins says, "Several times I have gone out to assess a situation and talk to Doc on the phone, telling him whether the patient should be admitted to the hospital. Both of us make house calls. The receptionist and office nurse play it by ear. They may call me, or they may call Doc. It depends on what's wrong with a patient."

Doctor Johnson has had no malpractice problems and the change in his practice hasn't posed any. "I called my insurance agent in Fort Wayne," says Doctor Johnson, "and he said, 'No sweat, so long as she's working in her field of competence and you're satisfied with her work!' Besides her coverage under Doctor Johnson's policy, Ms. Hopkins carries her own malpractice insurance, which is modestly priced at $25 a year.

There is little question that Doctor Johnson's patients have accepted the presence of a nurse practitioner. In Ms. Hopkins' first year with Doctor Johnson, his practice grossed 11 percent more money than the

cause of the salary paid to Ms. Hopkins. This year, mostly because of the recession, the gross has fallen. "Also, I haven't been working as hard," says Doctor Johnson. I'm referring more patients to the new doctors in town. I'm taking on many fewer new patients."

J.S.

A PRODUCT OF EVOLUTION

Henry Tufo, M.D., president and founder of Associates in Comprehensive Health Care, in Burlington, Vermont, gazes out of his office window on the University of Vermont campus, and thoughtfully chews his lower lip.

"Well," he says. "I'm not sure that we *are* a joint practice here. I'm not really sure that I know what that term means. But if it means physicians and other practitioners—like nurses, say—working together as equals in one practice, then, yes—I guess we qualify. We didn't start out with any such concept in mind, though. Our idea was to initiate a general practice within a specific type of health care system. We started with that and evolved. Whatever we are, we're a product of evolution."

Associates in Comprehensive Health Care, or, as it is more commonly called (in recognition of the fund that provided its initial financing), the Given Health Care Center, is a considerable enterprise. It occupies a floor and a wing of a former university hospital building, and is staffed by six physicians (including Doctor Tufo), two nurse practitioners, six paramedics, one visiting nurse, and nine other employees. A highly sophisticated practice in terms of patient treatment and monitoring of care, Given (as it is usually called) is equipped with such things as a computer terminal for screening presenting complaints, physician extenders for data collection, and algorithms and protocols for diagnosis and treatment. Everyone at Given, including the physicians and nurse practitioners, is salaried.

The system within which Given evolved is problem-oriented medicine (POM), an approach to medical care directly related to the use of the problem-oriented medical record (POMR). It is not surprising that Doctor Tufo heads Given or that it is located in Burlington. For, prior to founding Given, he had been a supporter of POM and POMR and had initiated a POMR system for U.S. Army Project AMOS (Automated Military Out-patient System) at Fort Belvoir, Virginia, and the University of Vermont is the home base of Lawrence Weed, M.D., the controversial and outspoken developer of POMR/POM, and the setting for his influential Problem-Oriented Medical Information Systems (PROMIS) Laboratory. Many of Weed's concepts—use of the problem-oriented medical record, auditing of patient care, availability of the medical record to the

patient himself, and a disregard for practitioners' traditional roles—are basic to Given's method of operation.

"One of our fundamental notions," Doctor Tufo says, "was that it was reasonable to organize our practitioners' duties in terms of the levels at which care was needed. That is, to use the appropriate people to do the things they were best at. That meant our physicians shouldn't be sitting around at an expensive rate collecting basic information or doing other things that someone else could do just as well—or better."

The Given approach results in a seeming blurring of roles. Indeed, an unenlightened observer merely witnessing the daily dispensing of care at Given might have trouble deciding who was the physician, who the nurse practitioner, and who the paramedic. Although this blurring—one of the most visible phenomena of joint practice—can be seen in almost any type of Given's health services, it is perhaps most noticeable during "Acute Time," a period between 3:30 and 5:00 p.m., (Monday through Friday), when patients are seen for problems that have suddenly appeared and require prompt evaluation—such as coughs, sore throats, minor sprains, or bladder infections.

Watching Joann Prince, in her white lab coat, as she questions a patient and examines an ear, it might be difficult to guess that she is a paramedic. She doesn't seem to be doing anything different from what Lyn Rothwell, a nurse practitioner, is doing in questioning and examining another patient. And when the nurse sends the patient home with instructions on self-care, she could well be confused with Laura Weed, M.D., who is doing the same thing with another patient, just a few offices down the hall.

A closer look at what each of these medical care providers is doing, however, reveals important differences in approach or responsibility. True, Joann Prince questions patients just as a physician might in a traditional practice. But her questions are formulated according to a set of protocols or diagrammatric algorithms, which she glances at from time to time. Similarly, her examination, which is fairly short and superficial, is also protocol-determined. Afterward, she may perform some protocol-indicated laboratory tests—and even work up test results if the laboratory technician is busy. Actually, however, she is merely collecting subjective and objective data on the patient's condition. And with this, her responsibility ends.

At this point—after Joann places her findings on a chart outside the examining room—the responsibility is then the physicians'. Lyn Rothwell describes the atmosphere of Acute Time and how decisions are made on who will treat patients after the paramedic has seen them.

"Acute Time is for the immediate needs of our patients," she says. 'People are seen on a first-come, first-served basis. Most complaints are

not complex. Either the nurse or physician may see the patient depending on the complexity of the patient's complaint. The medical students share in this mini-emergency room by seeing patients with problems that provide useful learning experiences." Lyn notes that medical students consult the physicians for approval of their assessments and plans for problems.

"My questioning, examining, and treating the patient is all set forth according to protocols," Lyn says. "We have protocols for otitis, cough, or other common ailments, which I simply follow. This might include prescribing medicine, which I also do—with the authorization of one of our physicians. Then I move on to the next patient.

"Of course, if it looks as if I can't handle a case from the data on the chart, I leave that one for a physician. Or if, during my exam, I uncover something I think I can't handle, I call for a physician. And believe me, when I first started I was out in the hall screaming for help every five minutes. But I learned that, with the help of the protocols, information is organized for me. Now I can handle more cases and feel more secure."

First-visit patients, however, are always seen by a physician immediately after the paramedic during Acute Time.

"We agreed that physicians see all first-time patients—either during Acute Time or for the initial exam," says Doctor Tufo.

"In terms of Acute Time, this was established because things that look fairly simple can be quite complex, and the nurses didn't feel all that secure assuming responsibility without the benefit of an extensive first workup to provide a complete problem list to assist in understanding our patients. With the problem list they know what information we've collected, our data base, and we systematically look for those problems we shouldn't miss. Then, too, it is a good way for the doctors to get to know the new patients."

Doctor Tufo says, "One of the initial problems for me was finding the right physicians for the practice. Since it was to be problem-oriented, the physicians had to be in agreement with Larry Weed's ideas. Since we are part of the medical school, they also had to be interested in research—in looking at the way we delivered health care—and in teaching students and residents about medical practice.

"Also, I had decided to use nurse practitioners and paramedics in the practice. I don't know if Doctor Laura Weed and Doctor Van Buren—the two physicians I initially recruited—had a hand in this decision or not. Probably they did. But I had already had experience with nurse practitioners in the Army. So I knew what they could do.

"We could have involved other health workers such as physician's assistants, but they came into being when everyone thought there would be too few physicians. Our intent was not to create new levels of medical

entrepeneurs, but to organize a system that identified tasks to be done. Nursing has a historical perspective and is already centered around the patient."

The role of the nurse practitioner was already fairly well established before Given's first such nurse—Louise Bedard—was asked to join the practice. "What we were looking for in our nurse practitioner," Doctor Tufo says, "was someone who listened well, was smart, quick to pick up on things. We also wanted someone who cared about people, had no inflated sense of herself, didn't foster patient dependency, and was willing to logically put down the steps she made in patient care so that she could make independent decisions. In Louise, we found all that and then some. So, we were lucky from the start.

"The nurse's overall role wasn't too clearly defined at first, because we started off with a task-oriented approach. We knew we wanted to use her primarily in the follow-up care of chronic disease patients but no limits were set on how far she could go. Whatever other duties she assumed grew out of the needs of the practice, the skills she developed, or how she saw her job."

Louise Bedard and Lyn Rothwell, who joined the practice about two years later, had much the same conception of the nurse's role. "I didn't have any model to follow in establishing my role," Louise Bedard says, "because there simply weren't any nurse practitioners in Vermont at that time. In the beginning, the physicians asked me, 'What would you like to do, Louise?' Well, the area I felt most secure in was long-term management of chronic diseases. That's what I told them I'd like to do, but I had other ideas about my role and what I might get into. I saw myself as a kind of patient advocate. Then, too, I wanted to develop certain skills, such as the physical exam, so that I might eventually help out in acute care. I wanted to become a primary health care worker who would share that responsibility with the physicians."

In the beginning it was mainly the physicians and nurses who were defining what their jobs would be. As procedures for treating patients were tested and refined, significant changes involving the nurse practitioner's duties were made. "The nurse started out doing a lot of data collecting and helping the paramedics," Doctor Tufo says. "Then, as we got a better handle on her role, saw what she could do, and got ideas from them on how they saw themselves in an expanded role, they moved on to other things."

Lyn Rothwell came to Given after 20 years in nursing. She had worked in hospitals and in public health nursing (in which she has a degree), and had organized the Douglas County Visiting Nurse Association in Kansas. She is the wife of a professor at the university and it was his appointment to the Vermont faculty that brought her to Burlington.

"I felt a bit frustrated when I first came here," she says, "because I had nothing to do professionally. Then a friend gave me a copy of Larry Weed's book and—Halleluja! I was saved. An acquaintance suggested I come over and talk to Henry Tufo. So I talked to Henry and he just suggested that I pick up some training and join the staff. The group looked at what they felt a nurse practitioner should be doing, what kind of skills she should have—especially physical exams and assessment. The physicians originally set up the goals for my training. Then we went around knocking at a lot of doors to get those skills. I went to ear, nose, and throat at the University Health Care Center for a while and learned the ear, nose, throat exam. Then I followed the respiratory service people around to find out how *they* did things. My training was piecemeal. The most important thing was that I was doing as I was learning—probably the best way."

The acceptance of the nurses' ideas was made possible by the structure of Given. It is controlled by its board of directors, and the directors are its six physicians and its two nurse practitioners. Each has an equal vote. They are all equal partners. The physicians' salaries are based on university time spent in teaching and research as well as patient care income. The Board fixes the salaries of the nurses, which is consistent with their ability to generate income. This practice is accepted, at least at the moment, without complaint.

There is a striking informality in the relationship at Given of the physicians and the nurses, and even between them and the paramedics. Almost all of the Given "employees" are on a first-name basis with each other when out of earshot of the patients.

There is a strong mutual respect among nurses, physicians, and paramedics at Given. "I'm made to feel I'm just as important as anyone else in the practice," Ms. Katie Koeningsberg, a paramedic, says. "I'd say I'm definitely a part of the team."

Doctor Tufo thinks so, too. "The nurses and paramedics are just as important as I am," he says. "If they're not doing their job, the whole system breaks down. As for the nurse practitioner, if you'd ask me if she's my equal, then I'd have to say, 'equal in what way?' Certainly, I don't consider Lyn or Louise as my employees. If you asked patients who had been treated by us in follow-up care, I suspect they wouldn't think so either.

"The decision making is done by the physicians and nurses. And it's not like, 'Here, nurse, we're giving you this great opportunity to do more things and I'm going to let you do them.' It's more like, 'O.K., nurse, we're all in this together and we're looking at who does what best.' Now maybe the physician does, maybe the nurse, maybe the paramedic. Or maybe the secretary."

The area of care in which the nurse practitioner can be seen working at her highest level of professionalism is in follow-up. Lyn Rothwell explains some of the things she and Louise Bedard do at this time with chronically ill patients. "We monitor signs and symptoms, educate, provide counseling—well, just about anything that's needed. Both Louise and I have worked and studied to get more and more involved in follow-up. That's where we feel we belong.

"But when a patient we've seen comes in with an acute problem, we also evaluate that. If we become specialists in chronic disease only and define our role too narrowly, we aren't really serving the patient *or* the system.

"Our follow-up care isn't a superficial thing where we check just a blood pressure. It's concerned with the entire patient and his problems, which include psychosocial aspects of his life. We are expected to modify the problem list, add to it, modify goals, even adjust medications according to the protocol or problem plans in the record.

"As for prescribing, I always have guidelines established by the group —or a physician's approval. It all boils down to a matter of trust that I will use the information available. I mean, I don't suggest some wild new drug that someone's just written up in a popular magazine. And the doctors know it. We are committed to using organized information."

Turning some follow-up care over to nurse practitioners has helped physicians. "Doctors are apt to come to medicine with a high need to make people dependent on them," Doctor Tufo says. "I think that's destructive for both physicians and patients.

"We found out that our goals were more likely to be achieved when a nurse practitioner provides follow-up care. Problems that *could* be solved seemed to *get* solved under her care. Now, that's not because of a difference in the quality of care between a physician and a nurse—or of intelligence, for that matter. It's simply that they don't get involved with that whole dependency thing and are able to focus on what is really wrong with the patient."

Other programs confirm the importance of the nurse practitioner at Given. A preceptorship program that operates within the practice, in cooperation with the University Medical School, is one of these. "One of the main goals of the preceptorship program was to get medical students involved in working with nurse practitioners," Richard Bouchard, one of the Given physicians, says, "to get them to find out how such nurses can function—in our cases as partners—and to get the students over some of their hang-ups about nurse practitioners doing 'doctory' things. We're fortunate in having very warm, personable nurse practitioners in Louise and Lyn, so the medical students get over the feeling that nurses are trying to take their jobs away, pretty fast.

"The students spend at least half a day each week with the nurses as they do follow-up care. Here, we ask the student to evaluate the nurses' follow-up care. Then the nurses get their comments. But you know, those students are far more reluctant to do that audit than about anything else.

"We're hopeful that some of our methods will rub off on the students. If we can open their eyes to the value of a nurse practitioner, perhaps we can get them to consider employing them in their practices when the time comes."

Auditing of the medical record is a basic tenet of the Weed POMR/POM system. At Given, it is done in various ways: By a part-time college student in accordance with established protocols; by the practitioners themselves, who work in pairs of nurse-nurse, nurse-physician, or physician-physician and who then audit their partners; by the paramedics, who may question a physician or nurse on the need for tests; and even by the patients themselves, who are asked to read over their record when they come in for treatment or are sent their records in the mail with a request to comment on them.

Lyn Rothwell says, "Auditing is a great educational aid to me—not only when someone calls me on the carpet for something I've done or failed to do, but also when I see something in the record that makes me question a physician. When I'm questioning physicians, I have to defend my position just as they defend theirs. If I've overlooked some important factor in making my criticism, then I learn something from their response. So it can be really enlightening for everyone concerned."

Doctor Bouchard offers the physician's viewpoint. "Oh, sure, I guess I did feel a bit threatened by the idea of audit at first. But I feel I'm practicing the best medicine of my life because of it. If I have a bad day—and that can happen—the audit will pick it up. There's a great feeling of security in that. Also, it enables me to take care of more people in a better fashion, while enjoying a very exciting interplay with my associates."

Doctor Tufo adds, "I think the pairing off of physician and nurse for audit—we spend at least an hour a week doing this—is a very good thing for us physicians. Not that we have some kind of strong need to be criticized. But the information sharing is important—the arriving at a correct mutual understanding."

Another fundamental aspect of the practice is the problem-oriented medical record. Doctor Lawrence Weed has insisted that this record be organized around specific problems and goals of the patient. Equally important is the principle that all practitioners or medical technicians who come in contact with the patient must make entries in a single record, and that this must be reviewed by all those treating him.

At Given, to ensure readability and easy understanding, these entries are produced mainly by a corps of transcribers, from tapes made by the physicians, nurse practitioners, and technicians. Only occasionally, when an entry is short or when a practitioner's time is crucial, are handwritten notes inserted.

Lyn Rothwell likes to point out the advantages of POMR for the nurse practitioner. "I'm more an equal partner in the medical care, with our kind of record," she says. "Let me give you an example. When I was a visiting nurse, a physician asked me to make a home visit to instruct a diabetic woman on insulin injections. He gave me her chart to look over. Nothing in the chart prepared me for the discovery I made when I arrived at her home, that she was blind. In our practice that just couldn't happen because blindness would be stated in the record as one of the woman's permanent problems. When information about people is well organized, all of us—providers and patients—can begin to build a good health care system."

R.O.

EASING THE BURDEN IN ENGLEWOOD

Denver, Colorado exerts a magnetic pull on those who love the outdoors. The Rockies rise at the city's back door and serve as a beckoning recreational paradise, offering hunting and skiing in winter, camping and fishing in the summer.

Among the many who have felt that pull is a New England cardiologist named Ira Kowal. Doctor Kowal first felt the pull on a couple of skiing visits in the sixties, and in 1970, he yielded, pulled up his eastern stakes, and set up solo practice in the Denver suburb of Englewood. His office, on the fourth floor of a medical building, is ideally situated. From his window he can see the mountains he loves, and the hospitals where he sees patients—Swedish Medical Center and Porter Memorial—are only a couple of blocks away. The hospitals are as important to Doctor Kowal as the mountains: He is not only a sportsman but also a worker. His work was quickly rewarded. He knew the secret of success.

"I made myself known," he says. "And I made myself available. I made it known that I was *always* available. Success in any specialty of medicine depends to a large extent on referrals from other physicians, and referrals depend on the specialist's availability. When another doctor calls, you say, 'I'll come.' You never say no."

Doctor Kowal continued to say yes, and within two years after opening his office, his practice had nearly doubled. In three more years, it had doubled again. A tireless worker, he found that the demand for his services was so great that he no longer had time for the recreational activities that had drawn him to the Rocky Mountains. Not only that, but he found himself unable to pursue all his medical interests. He solved this problem by hiring a nurse practitioner.

Her name is Marilyn Gorback, and she, too, is an easterner—a southeasterner. She came to Denver from Miami because, "I wanted to learn to ski." Ms. Gorback still displays a Miami Dolphins sticker on the bumper of her orange Fiat sports convertible. During the winter, she rearranges her work schedule so she can come into the office on Saturday and be free Tuesdays. "It's better skiing in the middle of the week, because you don't get the crowds," she explains. "You can ski down the slope and right onto the chair lift."

"I like that attitude," Doctor Kowal says. "People tend to be ashamed

of the arrangements they make to get free time. But you've got to find time to relax and renew yourself. I'm happy that I'm finally able to get away after a long period of overwork."

The addition of a nurse practitioner to his office staff not only gives Doctor Kowal more time for recreational activity, but it has also made it possible for him to expand himself professionally. He helps train emergency medical technicians—paramedics assigned to ambulance duty with the fire department. He has increased his involvement in rural health care, providing services for several small communities that otherwise would be unable to afford a full-time cardiologist. He purchased an airplane to enable him to fly to those communities (Lamar, Eads, Cortez, and Delta, in Colorado, and Lakin, in Kansas) at least once every month. At other times, he consults with rural doctors through a communications system that permits electrocardiogram readings by telephone.

Doctor Kowal has accomplished all this without any financial sacrifice. "For the first six months of this year," he says, "my gross income went up 40 percent, compared to the same period a year ago." The growth of his practice had been proceeding at that pace anyway, but he would not have been able to maintain that growth without additional medical support. Although the addition of a nurse practitioner's salary increased the overhead of the business, gross income improved sufficiently so that the percentage of overhead actually declined.

Decline of the overhead has been an important argument in convincing other physicians to add nurse practitioners to their office staffs. The question most frequently asked is: Do they pay their way? The answer in the case of Doctor Ira Kowal's cardiology practice is, definitely yes.

"A friend of mine is trying to establish a satellite nurse practitioner station in a small town south of Denver," he says. "He's very interested in what has happened to us over the first six months, because he wants to convince people that nurse practitioners are financially worthwhile. He's very pleased to know what my experience has been with Marilyn."

But financial gain is not the only reason for hiring a nurse practitioner. Doctor Kowal finds he can provide his patients with more services. One of the services is the stress test, which consists of electrocardiogram readings taken while a patient exercises on a treadmill. These tests are necessary in the modern preventive approach to cardiology but they are also time-consuming. Doctor Kowal charges $85 for a stress test done in his office, $75 if it is done in the hospital. He says, "Even if Marilyn did nothing else but stress tests, she would earn her salary." Marilyn Gorback also makes hospital rounds, seeing Doctor Kowal's patients. She can spend more time than he can to sit down with patients and talk with them about their ailments.

On this particular day, Marilyn Gorback, wearing brown slacks and a loose flower-pattern blouse, enters the room of one of Doctor Kowal's women patients at Porter Hospital. She greets the woman warmly. After making a brief examination and after asking a few questions about how the patient feels that morning, she sits down in a chair next to the patient's bed and removes a notebook from her shoulder bag. She then begins to sketch a diagram of a heart for the patient. She shows the drawing to the patient.

"This is a picture of your heart," she says. "The heart pumps blood throughout the body to provide oxygen and get rid of waste products." She goes on to give the patient a short lecture in basic cardiology, explaining, pictorially, the why and where of the pains the patient had been having in her chest.

At the end of the discussion, the patient asks if she might have the sketch to show to her daughter. Ms. Gorback gives it to her. She suggests that the patient and her daughter watch a half-hour movie about the heart, shown twice daily at the hospital on closed circuit television.

Doctor Kowal enters the room midway through the lecture. He is a tall man with a mustache and long straight hair. Today he is wearing a grey plaid coat, a western belt, and a black shirt with pictures of pheasants on it. He remains silent during Marilyn's instructions. He then raises his eyebrows and says: "I didn't know that. I'll have to watch that movie myself."

He moves to the side of the bed and begins listening to the patient's heartbeats with his stethoscope. At the same time, he feels the patient's chest. When he has finished, he asks Ms. Gorback to do the same. She does so, and tells him that she can detect an abnormality in the heartbeat. She describes what she has felt. Doctor Kowal seems pleased that his nurse practitioner has been able to detect the abnormality as well as he has.

He says later: "Physical examination of the heart is not easy. Many doctors cannot examine the heart adequately. It's really encouraging to find a nurse practitioner, like Marilyn, who can." He points out, however, that she cannot hear certain high frequency sounds that sometimes give him an extra clue as to the heart's health. He adds: "One of the key factors in our getting along is her knowledge of where her limitations exist."

Doctor Kowal and Ms. Gorback do not ordinarily see patients together. One of the major reasons for the employment of a nurse practitioner is to relieve the physician of routine duties. The two practitioners alternate days in making hospital rounds—if he sees the patient one day, she sees him the next—usually conferring later to keep each other apprised of their patient's progress. They also alternate on patient visits

back in the office.

The cardiologist and the nurse practitioner use a "problem-oriented record form" in writing notes about each patient. "It simplifies the job of relaying information back and forth," Doctor Kowal says. "You can look at the chart and tell at a glance how treatment is progressing." The problem-oriented record is an effective timesaving device, but Doctor Kowal likes occasionally to sit down and make a leisurely and detailed review of a patient's history as contained in that record. He finds such a review enables him to identify problems that sometimes get overlooked in day-to-day patient management. One recent example: Doctor Kowal reviewed the flow sheet on a patient's chart and determined that his hematocrit had been steadily dropping following an operation. Even so, the patient had not been put on iron. "He had been in the hospital for two weeks," he says.

"He was being seen by four other doctors. But somehow the dropping hematocrit got overlooked. I was able to pick it up because I had the time."

On other occasions, Ms. Gorback does the same kind of study. "She'll review a patient's history, and if she feels I may have overlooked something, she calls it to my attention." It is a clear case of two heads being better than one.

In addition to writing notes on a patient's progress in the hospital, Ms. Gorback also writes orders for changes in the management of that patient. If the patient is to be allowed out of bed, or if a certain test is to be administered, she can order it done. In instances involving major changes in medication, the decision comes from Doctor Kowal. Ms. Gorback may order medication after consultation with the physician or in keeping with a standard protocol agreed upon in advance. As a legal and practical precaution, Doctor Kowal reviews and countersigns any orders she writes.

When a patient is in the intensive care unit, hospital protocol requires that he be seen by a physician each day. Theoretically, a nurse practitioner has no status in the ICU. Nevertheless, Ms. Gorback often pays an informal visit to Doctor Kowal's patients in the ICU, so she will not be a stranger to them when she makes regular ward rounds later.

On one occasion, an order given by Ms. Gorback for transferring a patient to the regular ward caused consternation among members of the nursing staff. They thought she had independently reached the decision to transfer the patient. Actually, she had consulted Doctor Kowal about the possible move and he had agreed to it on the basis of the progress they had both observed over a period of time. "Not everybody knows yet how closely Marilyn and I work together," he says.

Back in the office, following the hospital visit in which she has given

the patient the picture of the heart, Ms. Gorback greets a patient with an appointment for a stress test. While the hospital patient was recovering from a heart attack, the office patient was trying to avoid one. Forty-one years old and muscular, the patient had been told by a YMCA physical director to obtain an extensive physical examination before increasing his workout regimen.

This advice, unfortunately, is not always taken. Although the various medical organizations recommend that people who start to exercise should obtain physical examinations, it sometimes is difficult to find physicians willing, or able, to give such thorough examinations. Most physicians are so busy treating sick patients, that they have little time to devote to "healthy" ones. When they do give physical examinations, those examinations often are not thorough enough to include a stress test. The YMCA director, however, had informed this patient that Doctor Kowal's office did give treadmill stress tests.

The patient had arrived carrying a pair of tennis shoes. While he sat to don them, Marilyn Gorback explained the test. The treadmill is long enough to accommodate several strides in a normal individual. It has a dial to indicate at what speed, in miles per hour, that the individual is moving on the belt. It has a handle that Ms. Gorback suggests the patient can use for balance, but not for clinging to. "What we're going to do," she explains, "is start you at 1.5 miles per hour at a ten degree elevation. We'll raise the angle until you're moving at 4.2 mph. You will want to run, but don't."

The patient strips to the waist. Donna Charlin, an assistant, helps attach electrocardiogram pads to his chest. She also wraps a belt for blood pressure monitoring to one arm. Soon the patient is striding along the treadmill at a comfortable pace.

Each beat of the patient's heart sends the electrocardiogram styluses skipping across the paper. Ms. Charlin handles the tracings and also takes periodic blood pressure readings. Ms. Gorback watches the pattern of the patient's heartbeats as they appear on an electric monitoring screen. With each increase in the speed of the treadmill, the heartbeats came faster and the patterns swing wider. Should the person's blood pressure rise beyond 200/110 or should the person experience chest pains or develop arrhythmia, Ms. Gorback would stop the test at once. When she administers such tests, there is a built-in safety factor—the requirement that Doctor Kowal be in the office at the time. If she gives the test at the hospital, he also must be present there. He must be there in order to provide treatment in case of an emergency.

With the test completed, the patient steps off the treadmill and sits on a nearby chair. He is covered with sweat and is breathing heavily, but the test has proved that his heart is in excellent condition. Marilyn

Gorback determines the condition by his electrocardiogram. As a double-check, however, she carries the tracing across the hall to where Doctor Kowal has been seeing another patient. He looks at the printout and agrees with her diagnosis. The man is given a clean bill of health and encouraged to continue his exercise regimen at the YMCA.

"I administered the test and read the results," Ms. Gorback remarks later. "Then Doctor Kowal reread the results with me. But, for the record, he signed the test because he's the cardiologist."

Doctor Kowal insists that his nurse practitioner can conduct treadmill tests just as well as he can. "She interprets the results very well," he claims. "We very rarely disagree."

When Ms. Gorback first began doing treadmill tests, some physicians objected. They felt the tests should be administered only by a cardiologist. These objections, however, have vanished with time. The staffs of both hospitals where Doctor Kowal sees patients now accept her in her professional role.

Marilyn Gorback was born in Los Angeles and lived in Detroit until age eleven, when a physician advised her father to move to a warm climate because of a heart condition. The family chose Miami, where Marilyn graduated from high school. She then for the first time began to think about a career.

"I liked science," she says. "So I decided to go into nursing. I guess I thought nursing was a much more scientific field than it is."

She attended nursing school at Jackson Memorial Hospital, in Miami, and after graduation became a staff nurse there. "I enjoyed what I was doing for a while. But then I got bored."

The hospital administration offered her a position as head nurse on the surgical floor, which also included the burn unit. It was difficult finding nurses to staff the surgical floor. Many nurses disliked working there. They particularly disliked working with burns. But she discovered that that was the part of the job that interested her the most.

She decided, nevertheless, to continue her education. She first attended Miami-Dade Junior College, part-time, then quit her job to go full-time to the University of Miami. After graduation, she worked in Jackson Memorial Hospital's department of research and development, teaching burn classes as well as doing infection control monitoring. She liked the teaching aspects of her job: "I found I enjoyed taking care of people who weren't critically ill—teaching them about their health, so they would not be returning to the hospital."

But she still felt restless, and in 1973, she made the big move West. "I had been at Jackson Memorial for nine years, and I was afraid I was going to live and die in that hospital. I felt I had to leave." An active scuba diver and water skier while living in Florida, she decided to

move to the Rocky Mountains area where she could learn snow skiing. She accepted a position as a staff nurse in the emergency room at Denver General Hospital, the biggest emergency room in the Denver area.

"There were so many headaches and pressures in my previous job," she says, "that I just wanted to put in my time, eight hours a day, leave at the end of the shift, and not worry about what happened afterwards. The patients you took care of in the emergency room either went home or got admitted to the hospital and you never saw them again. There was always a doctor nearby to make any important decisions. It was a one-time-only type of contact. I wanted to follow orders for a change instead of initiating them."

Ms. Gorback's life without responsibility lasted only six months. The administration of Denver General Hospital decided to expand the role of nurses in the emergency room. There were two sections to the emergency room—an acute trauma section, where people with serious injuries received treatment, and a receiving unit, where people with nonemergency medical problems (but who had no regular doctor) could obtain treatment. The administration wanted to utilize nurse practitioners in this second area. "They felt that nurses could do screening and treatment of those kinds of patients and would enjoy it more than the doctors did," she says. "They would have one or two doctors working as preceptors to the nurse practitioners. That would allow one doctor to do four times as much work by having the eight arms of four nurse practitioners."

Ms. Gorback, still restless, became one of seven nurses who volunteered to take courses to qualify as nurse practitioners for emergency room work. She started her training at the University of Colorado School of Nursing in January 1974, attending classes 40 hours a week and working 20 hours. She learned physical diagnostic skills. She also learned care for illnesses in an adult practice.

Ms. Gorback graduated in May, but she did not begin to function in her new role until September. Even then, she found herself working as a nurse practitioner only part-time. The problem was that the hospital had insufficient regular nurses to replace those they had trained as nurse practitioners. Her old restlessness returned, and she began to look for a job where she could fully utilize her newly-developed skills. There was one just over the horizon.

It was about that time that Doctor Kowal began searching for a nurse practitioner to assist him in his cardiology practice. He had grown up in Newton, Massachusetts, just outside of Boston, and had attended Williams College and Boston University School of Medicine. He did his intern and residency training in Cleveland and Boston, then worked for the Public Health Service in Norfolk, Virginia, before moving to Engle-

wood. Within four years, his practice there had expanded so greatly that he found himself not only with insufficient time to spend with his family, enjoying the outdoor activities that had attracted him to the area, but also too little time for other medical interests. He had been helping train a group of paramedics for the fire department, but now he found himself having to cancel classroom sessions because of the demands of his practice.

He began to consider the idea of a nurse practitioner. He had himself been involved in the training of several nurse practitioners at the University of Colorado School of Medicine. On two occasions, nurse practitioners trained in his office, one afternoon a week for a period of four weeks. "We would spend three or four hours together," Doctor Kowal says. "They would examine my patients and we would talk about cardiology. They were both extremely competent. That gave me a lot of confidence in the concept right from the start."

He was still thinking when a group of internal specialists on the floor above his office hired a nurse practitioner. "I watched them out of the corner of my eye," he says. "I began to look at the kind of things I might have a nurse practitioner do in my office, and I became convinced that it would become financially worthwhile. Let's face it, medicine is a business too."

Doctor Kowal met the nurse practitioner upstairs. They talked. She knew a nurse practitioner who wanted a job. Her name was Marilyn Gorback. Doctor Kowal contacted Ms. Gorback.

Marilyn Gorback, though well-trained as a nurse practitioner, had no background in cardiology. Ideally, Doctor Kowal might have taken a regular nurse with coronary care experience and sent her away for nurse practitioner training. But he did not want to wait the six months or more that this would require. He felt that it would be just as easy, and quicker, to take an individual with general nurse practitioner skills and train her in his office—as he had done with his two nurse practitioner students.

Marilyn Gorback joined Doctor Kowal in January 1975. "But we had to spend the better part of six weeks going over physical findings, to make sure we were talking about the same thing," she says.

There were also, however, some unexpected advantages to Doctor Kowal. He found that training her helped him organize his approach to his practice. "I can more specifically state *why* I do something now," he says. "It has helped me organize my own criteria for making specific decisions." He was able to delegate to her many of the tasks of a general nature that do not require specialized training, such as taking physical histories, teaching patients, and simply relating to them. "People

ask me what is she actually doing? Well, she's practicing cardiology. She does many of the things that I do all the time."

Doctor Kowal says that many members of the staff at Swedish Medical Center and Porter Memorial found it difficult at first to accept the fact that a nurse had taken over some of his duties. "She has unique experience in burn therapy that allows her to be as knowledgable as I am—or any other doctor—in fluid balance management in postoperative patients. The problem is having other people recognize her involvement. It's sometimes awkward for her to go into the coronary care unit and instruct a nurse to add 50 cc's of IV when there are three doctors circulating around."

Doctor Kowal was understandably pleased when he recently read in the *New England Journal of Medicine* about a proposed study to see if nurse practitioners could take care of stable hypertensive patients. "That was one of the first things we agreed upon when Marilyn came to work for me," he says, "that she could take care of patients with stable hypertension as well as I could, provided I gave her my criteria for care. Now here's a study being proposed on the feasibility of this approach, and we've been doing that for six months."

He points out that, in caring for such patients, you need only to do physical examinations, accumulate reliable information, and be thorough in recording and making assessments.

Doctor Kowal says that acceptance of his nurse practitioner by his regular patients has been good—with one or two exceptions. A businessman protested vigorously about being seen by a nurse practitioner when he reported to the office prior to having heart surgery. Later, while recuperating in the hospital, he had time to think. He told Doctor Kowal that there were a lot of people working in his business who had not been specially trained for their tasks, but who now did them well. "If that happens in business," he said, "I suppose it could happen in medicine."

The same man now confides information to Marilyn Gorback that he doesn't want to trouble Doctor Kowal with. In one instance, he was bothered by severe diarrhea and abdominal pains. He told the nurse practitioner, instead of the doctor, because he figured they were not cardiological problems. Ms. Gorback recognized, however, that his digestive trouble might be related to the medicine he was taking and effected a cure by suggesting that Doctor Kowal prescribe a different medicine.

Doctor Kowal expects that there will be some changes in Marilyn Gorback's role in his office. "She doesn't want to be another doctor, or mirror image of me," he says. He thinks that she may become more involved in follow-up care after patients leave the hospital, particularly

follow-up care related to preventing another heart attack.

Ms. Gorback agrees. "There are many stable hypertensives who just need somebody to watch them to make certain they don't get sick," she says. "When they get sick, they should be seen by a physician again." She hopes to establish a clinic for patients with pacemakers for their hearts. And Doctor Kowal plans to develop a system of testing those pacemakers by telephone.

Both Doctor Kowal and Ms. Gorback agree that one of her main contributions will be in showing, by her example, that others can function successfully as nurse practitioners in the practice of cardiology. Recently, another cardiologist with offices nearby hired a nurse to do treadmill work and see patients in his office. Doctor Kowal took this as a compliment that they were imitating him. On the other hand, he and Ms. Gorback were concerned because the woman had not trained as a nurse practitioner.

"I'm worried about other nurses expanding their roles without adequate training," he says. "Some of the nurses at the hospital are beginning to do a few of the things that Marilyn does. They have begun to report physical findings to me over the telephone. They're not as good as Marilyn, and it has become a significant problem, and somewhat of an irritation, in my daily work. Reliability is very important." He feels that some set of educational standards eventually must be established to accommodate the expanding roles of nurses in modern medicine. He admits that establishing these standards will not be easy. Marilyn Gorback, at the same time, believes that training programs eventually must expand so that a nurse practitioner need not have a sponsor before applying for training. "A nurse should be able to enter a nurse practitioner program having only her own commitment," she says.

In July 1975, Doctor Kowal expanded his practice further, by adding a second physician, Harvey Schuchman, M.D. Doctor Schuchman had worked with nurse practitioners while attending medical school at Indiana University, so he had no trouble accepting Marilyn Gorback's presence in the practice. Nevertheless, she and Doctor Kowal realize that they will need to change their old routine. "It's a three-way communication process now instead of two," says Doctor Kowal. "That's a big change."

Patients are billed the same amount in the practice whether they are seen by one of the physicians or by the nurse practitioner. This billing procedure caused some friction with two elderly patients. Doctor Kowal feels strongly that the fee should not vary, regardless of who sees the patient. That, he believes, would indicate that two levels of care were being given. He says: "My idea is that, if there is any compromise between what she does and what I do, then we haven't succeeded in our

goal. If she examines the patient and makes a less sophisticated decision, then the patient picked the wrong cardiologist's office.

"The cardiologist's job is to supply the highest level of sophistication. If there is less sophisticated care because we use a nurse practitioner, we are not doing our job. We set out to do something that would not compromise any level of care, and I think the cooperative effort of our continuing to communicate and work with each other works. She frequently does jobs more thoroughly and more reliably than I do. That's something that many people are not aware of. But I am. And I'm proud of her."

H.H.

FREER TO STOP AND THINK

"I saw what they were doing," Sharon Pattee says, "and I wanted to be part of it."

Ms. Pattee is a registered nurse, and the "they" she wanted to be a part of is the Stephens, Page, Hare, Belknap, and Church Clinic, a group practice of internists specializing in diabetes, in Portland, Oregon. The Clinic is among the most respected of its kind in the Northwest, and that, of course, was one of its attractions. There was, however, another and far more compelling consideration. Stephens, Page et al is an established physician-nurse joint practice. Ms. Pattee had spent some ten years working closely with physicians in such fields as hemodialysis and coronary care, and what she wanted now was an even closer working relationship.

She made her wish known at the Clinic, and tried to be patient. It was a short wait. In 1974, the office manager at the clinic retired, and Ms. Pattee was offered the job. She happily accepted. It was, despite its name, pretty much what she wanted: The office manager at the Clinic is a nurse associate whose managerial duties occupy only a portion of her time. Moreover, it is the usual practice at the Clinic for a nurse associate to work with one particular physician. Ms. Pattee's joint practice physician was, and is, John W. Stephens, a founding member of the partnership.

Each of the five physician-nurse teams in this practice works in much the same way. Variations in working relationships stem from the physician's style of practice and the type of patients he treats, e.g., child or adult diabetics. All of the nurse associates are trained, largely on the job, to conduct routine physical examinations, prepare complete case histories for new patients, follow established parameters in initiating treatment of chronically-ill patients, make initial assessments of acutely-ill patients, and, in many cases, initiate a coordinated health care plan, based on an evaluation of a patient's nursing needs as well as his medical needs. On occasion, nurse associates make hospital visits, doing histories and physicals, and, on occasion, they make nursing home visits. Sometimes, as a learning experience, they also make hospital rounds with the physicians.

Doctor Stephens has recalled the evolution of their experiment with

joint practice. "It came about," he says, "when we began to recognize that we could do more and more with nursing help." And the doctors were in a position where they *had* to do more. "We realized that we were going to have to be able to handle more patients and give more time to patients. But we also realized that you can work effectively for only so many hours a day. That was the problem."

The doctors then began to explore with the nurse hired as office manager and assistant, the directions in which her duties and responsibilities could evolve. "During our discussions," Doctor Stephens says, "she expressed an interest in participating more in clinical medicine. And that's the direction it went. As a result of our experience with her, our program evolved. Interestingly, it was at about that time that the nurse assistant or nurse clinician programs were beginning to evolve in Washington and in Utah, and the idea was being promoted by the American Academy of Pediatrics and the American Society of Internal Medicine. All of these people began to get the idea at the same time."

Doctor Stephens says joint practice has allowed him to accept more patients and to treat them more effectively, while, at the same time, relieving his feelings of guilt at having to reject patients, in the face of increased demands for medical care in his area.

"I've been able to increase my volume of practice somewhere around 20 to 25 percent," says Doctor Stephens. "What's more, I think I've been able to practice more effectively, because I don't feel quite the same pressure. I feel freer to stop and think for a moment. And I also don't have to go into the office on my day off to look after the two or three things that were left over."

Doctor Stephens goes on to describe what nurse associates in this practice do. "When a new patient arrives for a complete examination," he says, "they are seen first—whenever possible—by a nurse associate. The patient gives the nurse associate the initial history form, which had been mailed to him to be filled out. We have him fill out the form at home, because there, the patient, thinking more carefully about answers to the questions, is more likely to indicate why he's coming to see us. And he doesn't get flustered and forget some of these things, as he often does when he walks into our office.

"The nurse associate reviews the form with the patient and completes it. Then she takes him into an examining room. There she'll undertake to do part of his physical examination—examining the eyes and ears and nose, the throat and neck for swollen glands, the reflexes, circulation in the feet, nature of the nails, condition of skin between toes, and the presence of calluses. And, in some instances, she'll start examining the heart and lungs. More and more, the nurse associates are examining the heart and lungs, with us checking afterward. At the present time, this

is mainly a training procedure. Whether we'll continue with it in the future, I don't know."

In their preliminary interviewing, the nurse associates often are able to pinpoint a patient's problem in a way that significantly shortens the amount of time the physician must spend with that patient. Ms. Pattee thinks the nurse associates are particularly effective in this area.

"All of the nurses here are very warm, understanding people," she says. "And a lot of the people we see really need that understanding, particularly if they're ill. If they're troubled, whether it be emotionally or physically, they need understanding and empathy—job qualifications that are personal attributes as well as educational. So, you give the patient time to ventilate, and you do a lot of sorting out during that time.

"He might come in and hit you with an hour's worth of 'Oh my gosh, the terrible things that are happening in my life.' You can take that hour's worth and put it down in a concise report to the physician. And then the physician can spend five minutes in deciding—with you—a plan of care for that particular patient. Maybe the patient needs some counseling, or maybe he needs to go to a particular resource, like Alcoholics Anonymous. And it doesn't take an hour's worth of the physician's time to decide this."

Doctor Stephens believes the nurse associates do more than save time. "They improve our ability to handle patients more effectively," he says, "because many patients feel freer to talk to the nurse about some of their problems than they do to the physician." He cites, as an example, a diabetic in his fifties, who had been visiting the Clinic for several years. The patient's diabetes was under control, but he had become progressively more depressed. When he came in for his annual physical examination, the nurse, in taking his history, learned that his wife was terminally ill—and that he had assumed total responsibility for her care, while trying to continue at his job. The nurse associate contacted a public health agency and the local cancer society unit. They went into the home and provided nursing care and equipment.

"The nurse recognized the depression and got him to unload," Doctor Stephens says. "Patients often feel rushed talking to a physician, because they know he's so busy. But that patient walked out of the office completely relieved and feeling better because he had been able to talk to someone. Yet, his remark was that, if he hadn't been initially interviewed by the nurse, he was sure that he wouldn't have been relieved of the burden. He would have been reluctant to tell me about his problems."

The ability of nurse associates to assume greater responsibilities has been enhanced by the decision, several years ago, to switch to the problem-oriented medical record.

"For every visit," Doctor Stephens says, "we indicate why the patient was there and what we were doing for each and every problem he has. It's very easy for the nurse to quickly review what's gone on in the past and determine from this what I was thinking about the case. If it looks like things are working well, fine, the nurse carries on the program. If it's not working well, she calls me, or if I'm not there, one of my colleagues, and says, 'We'd better look at this differently.' And then, the situation gets a fresh look—a very pointed look, because her findings always relate to a specific problem."

Ms. Pattee likes the problem-oriented system. "If Doctor Stephens sees a patient while I'm not in attendance," she says, "he'll write his plan of care. Or, if I see a patient and Doctor Stephens is not here, I will write my analysis of the situation. These problem-oriented charts are just the greatest—particularly when you have a number of people, such as nurses, physicians, and laboratory technicians, providing care. It's all so well spelled out. The charts tell you the thinking behind any particular decision, so that a person with no previous knowledge of the patient could come in and understand the patient's problems and the reasons for the type of treatment provided."

The nurse associate can lighten the physician's work load in still other ways. "She exercises considerable responsibility in the assessment of incoming telephone calls," Doctor Stephens says. "She is able to make informed decisions when a patient calls, because she has helped the patient prepare his medical history, has participated in earlier examinations, has worked with the physician in close conjunction with the patient, and, thus, has a feeling for the patient."

The role that Ms. Pattee fills in the practice is one of considerable responsibility. This is particularly true on Doctor Stephens' day off or when he is out of town.

"In routine cases—minor illnesses and injuries—I give advice over the phone or prescribe some treatment," she says. "If the patient is having a cold that isn't going away with the usual treatment, or if he has an injury, I will have him come into the office, so I can get a history on him. I will then look over the situation and decide whether it is something I can handle with my education and experience. If not, I will refer him to Doctor Otto Page, who covers for Doctor Stephens when he's gone.

"It might be an acute illness that I become aware of in a telephone conversation—say a coronary. In that case, I'll tell the patient what he needs to do and where he needs to go. I might tell him to come to our office. Then, perhaps, I'll order a cardiogram or blood work or a chest film—that sort of thing. I will be gathering and screening material that Doctor Page will need to make a decision.

"Listening to patients when they call, I may even decide they don't have the need of a physician visit at all. Many times, they can come in and have certain blood work done to rule out a significant problem or have an insulin adjustment—neither of which requires a physician's time."

Ms. Pattee feels that there are many benefits in joint practice—particularly as practiced in the Clinic. They include time off for learning activities, time available for teaching and working with patients, regular hours, free weekends, and no on-call time. Another, and a major benefit, is job satisfaction. "I think any time you're involved in the end result of what you're doing," she says, "you have more job satisfaction. And job satisfaction is very evident here. The nurses are all involved. They feel involved and they feel they have a voice in the practice."

Part of that involvement may be due to the special programs provided by the Clinic for its nursing staff. In addition to the basic orientation given a new nurse associate—mainly by the physician with whom she will work—continuing inservice education activities are provided. Physicians and nurses, together, decide on the content for continuing education sessions, which are usually held every other week during the winter months. The teacher or lecturer for a session may be an outside specialist, a physician from the Clinic, or Ms. Pattee, who, this year, will monitor in a session on cardiology. Subjects for continuing education programs range from neurology to public health nursing. In addition to the in-service programs, nurse associates have the opportunity of taking related courses at a local community college. Continuing education is also happening when nurse associates research a problem or when they draw on each other's particular interest or area of expertise.

All such educational activities are important, Ms. Pattee feels, because of what she believes to be inadequate education in nursing schools. Ms. Pattee does, however, see some hope in the future. Already, she points out, some nursing schools are re-evaluating and revising their curricula to include such courses as physical diagnosis, a course that is particularly useful to a nurse associate (or nurse practitioner) in an office practice.

"Only on rare occasions," Doctor Stephens says, "have patients been reluctant to be interviewed initially by a nurse. A much more frequent comment has been: 'Gee, that's a nice lady. She certainly found out everything about me for you.'" Moreover, reaction to the nurse associate concept was overwhelmingly favorable in replies to a questionnaire mailed to Clinic patients. There was a 40 percent return of 400 questionnaires sent. Eighty-nine percent of those responding indicated they were strongly in favor of the concept, ten percent were in favor but had some specific reservations, and one percent were negative in their responses.

Among the comments volunteered: "With the nurse, I had the opportunity to discuss all of my concerns, instead of just those I think the doctor had time for." "My reports are available more quickly." "I felt more comfortable talking to a nurse." "Your nurses were more readily available to the telephone."

Encouraged by his own experience and by his knowledge of other joint practice ventures, Doctor Stephens says: "I think there will probably be efforts to recognize joint practice as an important aspect of the delivery of health care. And if it is recognized, the insurance companies and the government may want to develop a means of paying for services not now covered, for example, nurse associate visits to patients in nursing homes. I think it would be an excellent thing if I could send Ms. Pattee off on a nursing home call. She would probably look far more carefully at a patient than I would, in some areas. Whereas I may be looking at the patient as somebody with an illness and with specific needs relating to that illness, the nurse would be more sensitive to the patient's needs. She might even make a better nursing-home visit than I would. I think we could maybe alternate making calls. And, I think if she were recognized as capable of doing this under my direction, and if we could charge for that kind of service, we could then extend comprehensive care of a patient through his whole life."

Ms. Pattee agrees, and she hopes that nurses and physicians will turn increasingly to joint practice "as a means of providing more rounded and inclusive health care—servicing the well person and treating the acutely-ill person. I think this is one of the nurse associate's basic roles —counseling and making recommendations concerning normal, day-to-day living."

"However," Doctor Stephens says, "there are some pressures away from joint practice, both from physicians resisting the idea and from nurses wanting to establish independent service centers and do their own thing." But he himself is completely satisfied. Joint practice has had a great impact on productivity at the Clinic. It now has a daily average of from 100 to 125 patient visits and 10 to 30 telephone calls. "We've been able to develop our practice to the point where we're keeping abreast of inflation," he says a little wryly, "even though we are carrying a greater overhead than we have carried before. I'd like to see my income going up. It hasn't done that. My gross income has gone up, but not my net. But I think without the nurse associate, my income would have gone down."

As for Ms. Pattee, she is exactly where she wants to be.

BABY RUN

On a sunny morning in June, Lois Biechler is examining babies in the newborn nursery on the fifth floor of St. Joseph's Hospital in Marshfield, Wisconsin—as she does nearly every morning. She finishes this task and walks into the neonatal intensive care unit across the hall, where James Opitz, M.D., the physician in charge, tells her: "We've got a baby run to Wausau." Ms. Biechler asks a few brief questions, then picks up a telephone and calls the fire department.

When a fireman answers, she asks for an ambulance to go to Wausau to pick up a small premature baby, who is having some breathing difficulty. The fireman would call two off-duty employees who would appear, dressed in white uniforms, with an ambulance in less than half an hour. The fire department, which provides ambulance service for St. Joseph's Hospital, has been handling baby runs since the service was started in 1970. The fire department ambulance makes some 100 such runs a year.

Lois Biechler works as a pediatric nurse practitioner at the Marshfield Clinic next door to St. Joseph's Hospital. The Clinic is jointly owned by the more than 140 physicians who practice in it; the Sisters of the Sorrowful Mother run the hospital.

Shortly after arriving at her Clinic office that morning at eight o'clock, Ms. Biechler had walked through the tunnel to the hospital and taken an elevator to the newborn nursery. As she does four days a week, she gave routine physical examinations to newborn babies—measuring them, examining their throats, looking in their ears, listening to their hearts, doing a complete physical examination. She also fusses with them a bit because she likes children. She has five of her own, ranging in age from 11 months to 14 years.

There were three newborn babies that morning, and Lois Biechler had checked all of them by the time the call came concerning the Wausau baby run. When St. Joseph's Hospital originally established its neonatal intensive care unit, doctors from the Marshfield Clinic made all the baby runs. With the recent addition of two pediatric nurse practitioners to the Clinic staff, nurse practitioners now make most of the runs —an arrangement that causes less disruption to the regular office routine. The establishment of such joint practice procedures has increased the

efficiency of medical care at Marshfield Clinic.

"When a physician from some outlying community wants to transfer a baby here," H. James Nickerson, M.D., of the Clinic's pediatric department says, "he wants somebody starting out to pick up that baby as soon as the call is completed. In the old days, the physician on call had to drop everything to get that baby. This increased the work load of the other pediatricians, because they had to see his patients. The nurse practitioner may have patients scheduled, but she leaves a different kind of patient load: A primary, well-baby load, as opposed to a sick-child or referral practice load."

Ms. Biechler has no patients waiting in the Clinic this morning, but she does have new mothers in the hospital that she needs to counsel. She decides to see them quickly, before the ambulance arrives. Removing a floppy green surgical gown, she drops it into a basket. She is wearing a red skirt and blue jersey blouse. Only a small name tag on her blouse (Lois Biechler, R.N., Nurse Practitioner) identifies her occupation.

Lois Biechler leaves the nursery and hurries down a corridor to a patient room. Pausing outside the room she takes a chart from the wall holder. The mother, concerned about her child's jaundice, has been told by a doctor: "Oh, it's nothing, nothing." But that did not answer the mother's questions, Lois feels, so she enters the room and explains to the mother—and to the father who happens to be visiting—the reason for their child's slight yellow color. One of her own babies, Lois explains, had come out of the hospital looking "lemon yellow." While talking with the parents, she also runs through the routine of general information she gives most mothers, including:

Regular visits. "I'll want to see the baby back in the Clinic by the time she is three weeks old."

Telephoned questions. "Call in the morning, leave your number, and I'll call back. That's better than the afternoon, unless it's an emergency."

Baths. "Don't bathe the baby any oftener than necessary—only a couple of times a week or when she needs it."

She also assures the mother that it's not necessary to sterilize bottles or formula. "Really?" gasps the mother, somewhat stunned. Lois explains that she considers sterilization unnecessary with pre-sterilized formulas. Furthermore, sterilization possibly destroys some Vitamin C.

Two of the four pediatricians with whom she works in joint practice agree with her. "I feel comfortable telling their patients my views," says Ms. Biechler. "With patients of the other two, I describe how I feel, and I describe how the doctor feels. A reasonably intelligent person should be able to choose."

Most of Lois Biechler's working hours are spent not at St. Joseph's

Hospital, but at the Marshfield Clinic next door. Travelers who visit Marshfield, a farm-oriented central Wisconsin community of 15,619 people, seem awed at the size of the Marshfield Clinic. It is the sixth largest multispecialty group practice in the United States. The Clinic was founded in 1916 by six doctors, who saw very early the advantages of group practice. In late spring of 1975, the Clinic moved from several crowded downtown structures into a single modern office building adjacent to St. Joseph's Hospital. At that time, it employed 126 doctors and had plans to have a staff of 142 by the end of the summer.

Most of the people in Marshfield and environs utilize the Clinic for primary care. A function of the Marshfield Clinic that is, perhaps, even more important than providing primary care for those living nearby, is that of providing *specialty* care for a larger geographic area. Physicians throughout central and northern Wisconsin refer patients requiring special treatment to the Clinic. The baby run that Ms. Biechler goes on is just one example of that care.

Lois Biechler completes her conferences before nine o'clock, and returns to the newborn nursery for a transport isolette—an incubator that differs from those used in the hospital in that it has independent sources of heat and oxygen. She also obtains a large, glass-covered emergency supply kit, filled with medical instruments needed in an emergency. She pushes the isolette toward the elevator, while an attendant wheels a cart containing the medical kit. Five floors below, they wheel their gear to the emergency room door.

The ambulance has not yet arrived, so Lois telephones the pediatric clinic desk to learn if she has received any calls. She has received several, but none sounds urgent. By the time she finishes talking, the ambulance is waiting outside.

Lois Biechler made her first baby run in 1972, just prior to entering training as a nurse practitioner. She had been working as a supervisory nurse in the emergency room at the time. She was training a replacement staff, so there were extra personnel on duty. One of the pediatricians, George G. Griese, M.D., appeared, ready to leave on a baby run to Wausau for prematurely born twins. "Boy," he said, "I sure could use some help."

"I'll go along with you," Lois said.

At that time, pediatricians made most baby runs, although Fern Witte, a nurse practitioner who worked in the Clinic, had begun to make some. None of the regular hospital nurses went on baby runs and apparently none wanted to. "They were frightened," Lois says. "I was frightened when I first did it too. I still get scared sometimes. Because we get all the bad cases. Without the highly specialized care available in Marshfield, the survival rate for ill babies in the area would be considerably

lower than it is."

Shortly after ten o'clock, the ambulance arrives at the Wausau Hospital. Because she has been there many times, Ms. Biechler is readily accepted by the hospital staff. She has more difficulty at the smaller and remoter hospitals in the sparsely populated north country, which may refer only one or two babies a year. "They always expect a doctor to come," she says. "When they find out I'm a nurse, they get concerned."

As she enters the nursery, a hospital nurse approaches her to whisper: "We're not going to take this baby in to the mother. She doesn't want to see it."

"She doesn't?"

"Her last baby died. She doesn't want to get too close."

Lois dons a surgical gown and examines the baby, a two-and-a-half pound boy.

When Ms. Biechler wheels the baby out of the nursery in the isolette, she sees the mother who, despite her previous decision, is waiting for a look at her son. The husband stands by his wife's side. They seem more stunned than anything, and do not touch the baby.

Later in the parking lot, Ms. Biechler pauses to talk with the baby's doctor. The doctor nods optimistically toward the child. "He's going to make it," he says.

"He looks like he will," Ms. Biechler says. Then Lois Biechler climbs into the ambulance and the trip back to Marshfield begins.

Lois Biechler grew up on a farm outside Marshfield, Wisconsin. She was the oldest of ten children. "I guess ever since I was big enough to walk, I was basically a nurse," she says. After graduating from high school in 1955, she entered nursing school at St. Joseph's Hospital, becoming a registered nurse in three years.

She then went to work in a small hospital in Wisconsin Rapids. She did general nursing on all floors and on all shifts. "I probably learned more about the practical aspects of nursing there than during all my training. The only place we didn't work, at that hospital, was in obstetrics."

Ms. Biechler worked there eight months before marrying. Returning to St. Joseph's Hospital, she worked in gynecology for several months, then transferred to surgery. "We did all the fun things back then," she recalls. "We scrubbed and assisted the doctors. We didn't have a lot of paramedical and physician's assistants then. But later, we began to get so many of them that the nurses never got a chance to scrub any more."

She left surgery seven years later, when she had her third child. After a brief leave of absence, she returned to work in St. Joseph's emergency room. She enjoyed working there because of the increased responsibility she had. She dislikes waiting for others to tell her what to do.

"In an emergency situation you do what you are trained to do," she says. "The doctors realized we were capable of handling things, so they never gave us any guff."

Ms. Biechler had less success with other nurses. "I would take a patient from the emergency room to one of the floors and tell the nurse 'I've got so much oxygen going, and I've got the IV dripping, and when it's out you had better add another bottle.' They'd say, 'Oh, I can't do that unless I get a doctor's order.'

"Or I'd ask the floor nurses to have the lab technician take enough blood, because I knew we would need other tests. The nurses couldn't do it. The girls on the floor just didn't have any flexibility."

Lois Biechler became dissatisfied with her position in 1971, when a nurse joined the hospital staff as surgical services coordinator. The emergency room was under her jurisdiction. Ms. Biechler now had to ask permission to do what she had been doing routinely. During the winter, she called a friend in administration and told him: "Keep your eyes open if anything becomes available that looks interesting."

Not until the summer of 1972 did an opportunity materialize. Lois Biechler was on the ladder helping paint the house, when one of her children came outside to tell her she was wanted on the telephone. Her caller was Doctor H. James Nickerson, one of six physicians in the pediatrics department of Marshfield Clinic. "I heard you are interested in something different," he said.

"What do you have?," Ms. Biechler asked.

Doctor Nickerson was a young, progressive doctor who had attended medical school at the University of Iowa. He completed his training under the auspices of the U.S. Navy in Philadelphia, later serving three years at Camp LeJeune, in North Carolina. At this time, he became impressed by the Navy's use of ordinary corpsmen as "physican extenders." They listened to hearts, felt abdomens, and made routine examinations.

After discharge, Doctor Nickerson practiced one year in Iowa, where he taught one of his office nurses those same skills. Dissatisfied by the limitations of a small practice, he joined the Marshfield Clinic in 1970. One factor that attracted him was the Clinic's staffing. The pediatricians at the Clinic recently had trained one of their nurses, Fern Witte, to function as a pediatric nurse practitioner.

Six practicing pediatricians, however, stretched Ms. Witte's services too thin. When the University of Wisconsin offered a six-month program for nurse practitioner training, the Clinic pediatrics department decided to recruit someone to attend. This was the opportunity that Doctor Nickerson offered Ms. Biechler. She said: "I'm married, with four kids. I can't leave home and go to school for six months." The University of Wisconsin's campus in Madison was 140 miles away. But she

accepted.

Ms. Biechler found that she could alternate weeks between campus and home. The Clinic paid all expenses, in addition to her regular salary. "I thought the program was excellent," she says. "If we spent a week in class discussing chest examinations, I could spend most of the next week back here listening to hearts and lungs. And it enabled me to do what I never could do at home. I could read six hours a day. I could study. In a house with a bunch of kids, if you've got five uninterrupted minutes, you're lucky."

Lois Biechler transferred from the emergency room to the pediatrics clinic in November 1972, began the nurse practitioner program in January, and graduated that June. She went to work immediately, functioning in the same capacity as her colleague, Fern Witte.

Originally, the two nurse practitioners worked with all six pediatricians, but that caused some minor problems. "One of us may like to prescribe one particular vitamin preparation," Doctor Nickerson says. "Another may like a different preparation."

Eventually the doctors divided themselves into teams of three, with each team working with a particular nurse practitioner.

Ms. Biechler experienced no trouble in adjusting to the routine of three pediatricians. "Doctor Nickerson participated in my training," she says. "Doctor Wagner was a young physician who had just come here, so he was willing to learn. Doctor Porter has been very cooperative. I know what he wants most of the time, but if I don't know I just go ask him. All three are very consistent." Within recent months, Doctor Teresa Silberman joined the staff, and Lois Biechler was assigned to work with her. "She also is very easy to get along with," Ms. Biechler adds.

Doctor Nickerson feels they may be stretching their nurse practitioners too thin again. When the Clinic decided to add an eighth pediatrician, he suggested they add a third nurse practitioner instead. Although the eighth pediatrician was hired, Doctor Nickerson still has hopes of hiring a third nurse practitioner.

The pediatrics department has developed a set protocol by which the physician and nurse practitioners divide the work. Ms. Biechler does half of all routine physical examinations during a child's early years. She checks the child in the hospital shortly after birth and also at three weeks. The pediatrician checks the child at two months and the nurse practitioner at four months. The pediatrician sees the child at six months and the nurse practitioner at one year. The pediatrician then sees the child at 18 months.

In addition to this regular patient load of well-child visits, Ms. Biechler sees sick children whose mothers bring them into the Clinic on short notice. She has become somewhat of a specialist, she says, at clean-

ing ears. "I also look at sore throats and take care of injuries. I can order blood work or x-rays and check with the radiologist regarding x-ray results."

Ms. Biechler does not sign prescriptions, but she does write them for doctors to sign. She also calls common prescriptions into drug stores. The four physicians she works with operate differently regarding telephone calls. Doctors Nickerson and Silberman have her answer all their incoming calls. Doctors Wagner and Porter answer their own calls, then assign patients to Ms. Biechler. On most calls, a decision must be made whether the caller needs to bring the child in that same day, bring the child in the next day, or relax and see what develops. "A lot of mothers merely want to be reassured," says Ms. Biechler. When the ailment decribed over the telephone is an earache, however, she always requests a patient visit. Doctor Nickerson feels that is one medical problem that cannot be diagnosed adequately over the telephone.

At one stage, Lois Biechler and Fern Witte were assigned, in regular rotation, to be "second call" on weekends. In an emergency, if the on-duty doctor was already occupied, the nurse practitioner would see the patient. Several physicians became uneasy about this arrangement and, after about a year, suggested that nurse practitioners be taken off second call. "It was a close vote against," Doctor Nickerson says, "about four to three." Even though they're not on second call, the nurse practitioners still make baby runs on weekends when their turn comes.

"Newborns have to be carefully observed during transport," Doctor Nickerson says. "The complications they get, and the symptoms they have, are entirely different from those of adults who get sick. For instance, when an adult becomes blue, it means he is not breathing. When babies become blue, it can mean three or four things not commonly seen in adults. It can mean their blood sugar is low. It can mean a serious infection in their blood or in the central nervous system. The alertness of the person transporting the baby is important in discovering these symptoms early and in doing the appropriate things." Doctor Nickerson and the other Clinic pediatricians have full confidence in the alertness of Fern Witte and Lois Biechler.

Ms. Witte and Ms. Biechler are not the only nurses at the Marshfield Clinic to have expanded their roles under the new emphasis toward joint practice. Even before Fern Witte began undergoing her apprenticeship as a nurse practitioner in 1970, physician's assistants began to be utilized to put on casts, assist the surgeons, and make some postoperative rounds. The department of general surgery has used nurses in an expanded role for about ten years. Francis Lorenz, M.D., director of the Foundation's physician's assistant school described this in an article written several years ago for the *New England Journal of Medicine.*

The most recent utilization of nurse practitioners has come in the obstetrics department where several nurses completed additional training that permits them to work in surgery during high-risk deliveries. In the department of internal medicine, a nurse practitioner is now working with the endocrinologist, supervising diabetics. Other highly-trained nurses now work in the fields of oncology and plastic surgery.

Though constantly aware of her own fallibility, Ms. Biechler has become increasingly confident in her new role. "One of the hardest things for me to get out of my head was the feeling that I had missed something if I saw a child one day and didn't find anything and one of the doctors saw him the next day and found the child was very sick. This still bothers me somewhat, although I'm improving." Recently, a father stopped her in the corridor to tell her how sick his little girl was. Lois had seen the child just the day before, but she had only had a runny nose. "A year ago that would have bothered me more than it does now. That happens all the time to doctors, too."

Such instances are rare, however, and acceptance of nurse practitioners is high among those who go to the Marshfield Clinic. Doctor Nickerson recently made a mail survey of a random group of 100 patients. On the questionnaire, he wanted to know, first, whether the patients were satisfied with the care given? He found out they were. Second, he wanted to know what the patients thought about the work of the nurse practitioner. So he asked the respondents to rank the care given by the nurse practitioners as equal to, better than, or worse than the care given by physicians. He found that most people felt the care was equal to that of a physician. Third, he wanted to determine the feelings of patients as to the amount of time that various practitioners were spending with them. The nurse practitioners rated particularly high in that respect.

Doctor Nickerson received only three negative responses: One patient did not like the idea of treatment by nurses; two others did not like the particular treatment they received. He considers this encouraging. "Three percent of people will feel negative about almost anything," he says.

While Lois Biechler has found herself readily accepted by most doctors with whom she works, she sometimes encounters resistance on the part of nurses who refuse to accept her in her new role. "Nurses always have been possessive of their image," she says. "I don't work with many nurses in our Clinic, because we have mostly medical assistants. But some of the girls I went to school with had a hard time with other nurses. The old attitude is: 'It's O.K. to put a stethoscope to your ears to count the number of heart beats, but if you hear anything wrong with that heart you don't tell anybody.'"

"The concept of the nurse practitioner today, in many respects, is

foreign to the old concept of nursing. All the things you were never allowed to do years ago are now common practice. I don't have to write on the chart, 'appears to be such and such.' I can now say 'is.' This is part of the maturation process that comes with my job."

In the back of the ambulance coming from Wausau, Lois Biechler devotes her attention to her tiny patient. The baby's temperature has been running high: 100.6 degrees. "That's a little higher than I'd like to see," she says, "but it's better than the babies with low temperatures. You turn the heat up full force and sometimes you still can't get them up to normal."

The ambulance arrives back at St. Joseph's Hospital at 11:20 a.m. and Ms. Biechler wheels the isolette to the newborn nursery on the fifth floor. An ICU nurse weighs the baby, measures him, and places him in a regular incubator in the neonatal intensive care unit. She then telephones Doctor Opitz: "The baby looked good all the way back." Then she tells the nurses she is going to the Clinic.

The nurse practitioner walks through the tunnel toward her office where the receptionist hands her a stack of telephone slips, mostly from mothers who have called. One of the medical assistants already has cared for a family of five troubled by sore throats. The assistant has seen the patients, examined their throats, done throat cultures, and sent the cultures to the laboratory for analysis. Lois Biechler, looking very relieved, thanked her.

Ms. Biechler sits down in her small office. In it is a crayon-drawn wall poster, featuring stars, a rainbow, and the words: "Super Mom works here." She moves the file folders on her desk to one side so she can work. "I vowed when I moved up here I wasn't going to have a messy office like I had in the old clinic, but it's just as bad."

She picks up the telephone and calls the first number from the pile of slips. "Hi, it's Ms. Biechler at the Clinic. You called?" The woman on the phone describes how her two-year-old daughter is suffering from fever and a rash. Ms. Biechler asks several key questions, determines the child probably has chicken pox, and advises the mother on what to do.

During the rest of the day the nurse practitioner examines seven children. She orders x-rays on one and later walks up to the x-ray room, where the radiologist confirms what she had suspected—sinusitus. On another occasion, while examining the ear of a child, she sees what she suspects is an infection. She asks Doctor Wagner to confirm her diagnosis. He looks in the child's ear, nods, and orders the appropriate medicine.

Ms. Biechler can not forget the little boy from Wausau, however. Later that afternoon, she inquires of one of the medical assistants, who had just returned from the hospital: "How's that baby I brought in

doing?"

"Doesn't seem like he's doing well at all," the medical assistant says. She thanks him, and tries not to worry. But she does.

H.H.

THE ROBERTS TEAM

At 12:30 p.m. on Thursday afternoon, the waiting room of the General Pediatrics Clinic of Wyler Children's Hospital remains empty except for one family waiting to be seen on appointment. A large picture window brightens the area, which, in addition to waiting room furniture, contains miniature playground equipment—a tube, a ramp, a rocker. The walls glow with the work of junior artists—pictures of airplanes, flowers, and the Easter bunny signed by George, Aaron, and Sandra. Across the hall, Clinic staff members return from lunch and prepare for the afternoon patient rush. Forty mothers and their children would appear in the next three hours.

As the opening time of 1:00 p.m. approaches, mothers arrive, carrying infants in pastel blankets, some of the infants asleep, some of them feeding, some of them crying. Others arrive leading older children. The Clinic comes alive with sound, with movement, with tension.

After each mother checks in at the desk, the receptionist directs her to one of several dozen examing rooms arranged in honeycomb pattern behind the reception area. The rooms fill quickly. In Room 1-E, a child cries lustily. Next door, in 1-F, another child sits contentedly on her mother's lap. In 2-B, a mother bottle-feeds her baby. Two women and a child wait silently in 3-E, one of the women holding a balloon. The door of 3-F is closed, an examination already taking place. In 3-G, a mother leans over her child on an examining table and coos: "Ba-bee. Ba-bee."

At 12:50 p.m., a woman appears in the Clinic's rear corridor and pauses before a large blackboard. The blackboard, which cannot be seen from the reception area, contains information about the waiting patients—appointment time, names, times and order of arrival, the rooms in which they wait, and a blank space at the right. Atop the board is an identifying title: "Roberts Team."

The woman at the board wears tan hush puppy shoes, brown slacks, a brown sweater, gold earrings, and a clean, blue medical gown. She has a trim Afro and her brown eyes sparkle. She carries a small packet of instruments in one hand. Her left pocket contains a stethoscope. Attached to the lapel of her gown is a plastic identity badge featuring her photograph (in color, smiling cheerfully) and the name: *Loris Jean*

Roberts, R.N., Pediatric Nurse Associate.

Ms. Roberts studies the blackboard for nearly a minute. Some of the previously blank spaces on the right contain chalked names of other members of her team: Berkelhamer, North, Bollinger, Cobbs. She takes a piece of chalk, hesitates, then announces to the person observing her that day: "I think I'll see this one first. The nurse told me her child was losing weight, and her doctor is on vacation. One of the good aspects of the team concept is that several members can take over if one is away." She chalks the name "Roberts" in the blank space next to Room 3-G.

Loris Jean Roberts, R.N., pediatric nurse associate, is the captain of a unique nine-person team that provides health care in the General Pediatrics Clinic of Wyler Children's Hospital on the University of Chicago campus. The other eight team members include: (1) Jay Berkelhamer, M.D., the attending physician; (2) Julie North, a child health associate; (3) Evie Bollinger, another nurse practitioner; (4) Sara Cobbs, M.D., a resident physician; (5) Richard Furlanetto, M.D., another resident physician; (6) Lois Nelson, M.D., still another resident physician; (7) Nancy Mullan, M.D., a child psychiatrist, and (8) Colleen Turnoch, a social worker. All work together, and apart, to offer total health care to patients of the Clinic.

Ms. Roberts pauses in the hall outside Room 3-G and takes a file folder from a wall holder. Leafing through it, she nods and nods again. She then tucks the folder under one arm and enters the examining room. The mother who has been cooing "ba-bee" looks up. Ms. Roberts introduces herself. She has a soft, warm voice. "I'm Ms. Roberts. I'm the nurse practitioner."

Quickly she adds that Doctor Nelson (the resident physician who had seen the mother on her last visit) is on vacation. Ms. Roberts is careful to explain she is *not* a physician, but says, if necessary, a physician can be consulted after she examines the baby. The mother smiles as though she understands.

Speaking with a lilting Jamaican accent, the mother describes her two-month-old baby's week-long bout with diarrhea. Ms. Roberts begins to examine the child saying, "She's a beautiful baby, just beautiful." The baby begins to cry. "She is hun-gree now," the mother says. "My goodness!" exclaims Ms. Roberts, scratching the table next to the baby's ear. The baby, diverted, stops crying.

After completing a physical examination, Ms. Roberts sits at a desk and writes while talking with the mother. She asks the mother questions: Is it the mother's first baby? Has the baby lifted its head yet? When was the baby last fed? What does she feed her? "I geev her formula," the mother says. The mother also shows the nurse practitioner some

medicine obtained at the maternity hospital. Ms. Roberts asks to borrow it, saying she would like to show the medicine to one of the Clinic's physicians.

Ms. Roberts suggests a temporary diet change: Clear liquids, such as 7-Up or ginger ale. Ms. Roberts also recommends a fresh ripe banana, tea with sugar, and predicts that the diarrhea soon would improve. "Give me a call tomorrow at this time." She asks the mother to dress the child, but to wait.

"Thank you, doc-tor," says the mother, as Ms. Roberts leaves the room.

Outside in the hall, Ms. Roberts smiles and shakes her head. Despite her continuous efforts to explain her function in the Clinic, she says patients still fail to comprehend. "They forget," she goes on. "Many patients associate the use of instruments with doctors. When they make their initial visit, I try to describe who I am, but they still ask: 'Are you studying to be a doctor?' We have to continuously try to educate them and explain we are *not* doctors, we are specially trained nurses. Sometimes it takes four or six visits for patients to understand my role as primary care provider. But even if the patients don't understand the concept of pediatric nurse associate, they do accept us. I think it's a matter of the patient finding out how competent a nurse practitioner can be."

The nurse practitioner concept is so new that many staff members of the University of Chicago hospital complex also are confused concerning Ms. Roberts' position in the medical hierarchy. Several years ago, when she first began seeing patients at Wyler Children's Hospital (one of many specialty hospitals of the University of Chicago Hospitals and Clinics), a doctor friend approached and wanted to know what to call her now. "I told him he should call me 'Ms. Roberts,' or 'Loris Roberts,' or 'Jean Roberts.' Many people want to take us out of the nursing profession entirely and put us in another category. I resist that."

Ms. Roberts, the bottle of medicine in her hand, walks the corridors seeking one of the several physicians in the Clinic that day. In addition to Doctor Berkelhamer, attending physician and director of the children's Pediatric Clinic, two resident physicians (Doctors Furlanetto and Cobbs) are on duty.

Seeing none of them, Ms. Roberts waits patiently by the blackboard. "The M.D.s are all busy," she says. "That happens every now and then. And it slows me down. But this is a teaching clinic, and we have medical students here as well. Often they tie up our pediatricians." Illinois is one of the many states that has recently passed legislation supporting expanded roles for nurses. But nurse practitioners function under their nursing license. Ms. Roberts is protected legally because a physician

supervises her in all medical matters. She obtains a physician's signature for prescriptions.

At that moment, a man pops around the corner. He wears glasses, a blue bow tie, a pink shirt, and a white medical gown. The badge on his lapel identifies him as Jay Berkelhamer, M.D. Ms. Roberts stops him. She shows him the medicine borrowed from the mother in Room 3-G. "Jay, is this something that might aggravate diarrhea?"

Doctor Berkelhamer examines the label of the medicine, then asks to see the patient's file folder. Glancing through it, he nods his head. He returns it and the medicine to Ms. Roberts. "Tell the mother to put the medicine in the circular container," he says, then adds with a smile: "Throw it away."

Ms. Roberts returns to her patient and slightly rephrases the physician's advice: "You can have this medicine back—but I don't want the baby to have it."

The families who use the children's Pediatric Clinic at Wyler form a polyglot, which, in Doctor Berkelhamer's words, "reflects the nature of the inner city and this part of town." The University of Chicago is located in Hyde Park, a south side neighborhood. Hyde Park (along with Kenwood, an adjoining neighborhood) exists as an interracial, middle-class enclave amidst a black ghetto. To the east is Jackson Park and Lake Michigan. To the south, west, and north lie neighborhoods that are a mixture of crowded tenements, lots scarred by urban renewal, and housing projects. The Clinic's patients include families of university professors and middle-class working people, but mostly poor families, dependent on the government for their succor. The patients are 70 percent black, 30 percent white.

"Many of the families in this area are crisis-oriented," explains Ms. Roberts. "The only time they see a doctor is when they're seriously ill or have an accident. Then they visit an emergency room."

The result is fragmented care. These families never see the same doctor twice. They do not get plugged into the health system. They are less likely to comprehend preventive medicine. They rarely obtain immunization shots or nutritional counseling. According to Ms. Roberts, one method of providing better medical care for crisis-oriented families is catching family members in the emergency room, making appointments for them to visit the Clinic during regular hours, and convincing them that health can best be maintained on a planned basis.

Until a few years ago, even this method did not do much to alleviate the problem of fragmented care for families using Wyler's general Pediatric Clinic. The Clinic's main reason for existence is as a pediatric teaching unit for medical students at the university. Typically, a resident physician spends one year attached to the Clinic, then leaves for regular

practice. Even staff physicians assigned to the Clinic, such as Doctor Berkelhamer, appear only on a part-time basis because of other responsibilities. They can not easily be reached by telephone. They have limited time for counseling individual patients.

"The patients were left with little other choice except to see someone they hadn't seen before," admits Doctor Berkelhamer. "That's when we came up with the concept of teams. Rather than being assigned to one physician, who might or might not be present in the Clinic every day, the patient is assigned to a team, for example, the Roberts Team. We have three teams at Wyler, and, on each of them, it is the nurse practitioner who provides the stable element. It helps to eliminate the problem of fragmented care. If you get to know your primary health care provider, you are more likely to follow through on good health care than if you don't."

At 1:45 p.m., her first patient visit completed, Ms. Roberts erases that patient's name from the blackboard and considers the others. She chalks her name in the blank beside Room 2-B, then walks in to say hello.

A four-year old boy sits on the examining table, dressed in a gown. His mother waits nervously, leaning forward in her chair. Her little boy has a speech defect. Ms. Roberts is relaxed and friendly. "Do you know what this is?," she asks the boy, showing him her stethoscope.

The boy smiles and nods.

"Show me where it goes," she says, and the boy takes the head of the stethoscope and places it on his chest. "You're going to help me," Ms. Roberts tells him.

She spends 50 minutes with this second patient, convincing the mother to delay clipping the boy's tongue to improve his speech.

Ms. Roberts leaves the room to arrange appointments with a speech therapist, who has an office within the hospital, and also to locate Doctor Berkelhamer again to have him approve a prescripition.

By 2:30 p.m., Ms. Roberts is back before the blackboard. Julie North, a child health associate and a member of the Roberts Team, passes and says: "I saw one of your babies, Jean. She's doing quite well." The two rapidly exchange views, then each goes a separate way.

Ms. Roberts pauses in the doorway of Room 1-E and gazes at a chubby little baby sitting on her mother's lap. "Why, I haven't seen Donna in ages," she tells the mother. "I had to fight for her today. Just *everybody* wants to see her." The mother beams.

The utilization of health care teams centered around nurse practitioners at Wyler Children's Hospital is part of a unique movement in medicine, which was made necessary by the changing health needs of the hospital's patients. "We were having increased demands to deliver more medical service to the surrounding community," Doctor Berkel-

hamer says. "At the same time, we were also anxious to establish a format of health care delivery that would be both realistic and a model, so that when we trained residents they could build on this experience and use it as an effective pattern for their future practices."

Wyler actually has three areas where patients obtain health care on an outpatient basis—an emergency room, open 24 hours a day, which averages 50,000 patient visits a year; a referral Clinic, centered around specialists in 15 different pediatric specialties, which handles 12,000 patient visits a year.

It was in this third area that the university staff first elected to test its team approach. Wyler's Pediatric Department, including John Madden, M.D., Samuel Spector, M.D., and Albert Dorfman, M.D., had learned about the pioneering efforts of Henry Silver, M.D., at the University of Colorado, to expand the roles of registered nurses. But trained PNAs—pediatric nurse associates, such as Ms. Roberts, (or PNPs—pediatric nurse practitioners), were not easy to locate. The university finally decided to train its own, selecting three top nurses to undergo a 16-week course. (The university no longer trains its own PNAs, utilizing instead the training facilities of Rush-Presbyterian-St. Luke's Medical Center on Chicago's west side.)

One of the nurses chosen was Loris Jean Roberts. Ms. Roberts, who was born in Springfield, Illinois, decided at age four to become a nurse ("I just liked people"). In 1961, she received her diploma from the school of nursing at St. John's Hospital in Chicago. She then joined the Illinois State Pediatric Institute staff and worked part-time at the Chicago Osteopathic Hospital to help establish a pediatric unit. She switched to the University of Chicago hospital in 1969, joining the pediatric outpatient department as a staff nurse. She also shared some head nurse responsibilities.

Ms. Roberts had become unhappy with her career advancement: "I felt that I was becoming a little stagnant." When she learned of the PNA training program, she applied and was accepted.

Ms. Roberts found the job of nurse practitioner to be an expansion of her former role. "I learned some new skills, but mostly I was expanding on skills I already owned, applying them more than before. Nurses always get involved in the assessment of illnesses or management of child care. I just had never used the instruments."

At the completion of her training, she was assigned to a health care team, which was then named after her. The Clinic had two other teams, the Jones Team and the Sturdivant Team. Each was identified by the nurse practitioner assigned to it. "The reason we named the teams in their honor," explains Doctor Berkelhamer, "is because they were three new professionals, unknown to many people, and we wanted to make

them very visible. We also wanted to give them a certain amount of recognition."

Doctor Berkelhamer, the attending physician on the Roberts Team, attended the University of Michigan Medical School and received his training in pediatrics at the University of Chicago. He returned to Chicago in 1972, after working two years with the U.S. Public Health Service in Norfolk, Virginia. At that time, only two nurse practitioners worked at Wyler; now there are ten. The additional eight, including one male, serve in the emergency room.

Several of the emergency room nurse practitioners also work as members of Clinic teams. Evie Bollinger is the emergency room PNA member of the Roberts Team. "Most of the patients that I follow in the Clinic I saw first in the emergency room," she says.

The duties of all nine members of the Roberts Team overlap, although each has well-defined responsibilities in certain areas. The two nurse practitioners—Ms. Roberts, as well as Ms. Bollinger—concern themselves mostly with what are called "well babies." So does the child health associate, Ms. North, although, because of different training, she becomes involved more with "sick-baby" problems than do either of the PNAs. Doctor Berkelhamer handles mostly sick-baby problems—conditions for which more specialized knowledge is necessary. Three resident physicians (Doctors Cobbs, Furlanetto, and Nelson) support him. However, as Ms. Bollinger points out, "We all share patients."

Colleen Turnoch, the social worker on the team, concentrates on what might be considered family, or nonmedical problems. Doctor Nancy Mullan, the child psychiatrist, deals with behavioral problems. She also leads a discussion session after the Thursday afternoon clinic—the only period during which all nine members get together.

One nurse, two nursing aides, and three desk clerks assist in day-to-day Clinic operations. During a typical Thursday three-hour session, the Roberts Team treats 40 patients—a relatively small load, considering the number of people involved. "Your average general practitioner probably would see 20 patients in a similar time period," says Doctor Berkelhamer, "so we're attending the patient load of about two GPs. And we're not only providing primary care, we're also a teaching clinic."

The Clinic charges $15 for the average patient visit. Many of the people who use the Clinic have their care paid for by insurance programs. Their fees are paid, in 60 percent of the cases, by the Illinois Department of Public Aid. For those few families who have no source of payment, charges can be reduced.

However, some families are turned away. "If we accepted everybody we would be unable to provide comprehensive care," says Doctor Berkelhamer. "We'd become an emergency clinic. We'd lose our focus

patients as we are able to give comprehensive care."

He points out that a nurse practitioner can be a profit-making arrangement, allowing hospitals to cut expenses. A pediatrician has 11 years of training beyond high school, while a PNA has five. Despite the difference in their education (and pay scales), many of the tasks performed by each overlap. Doctor Berkelhamer sees three avenues open for the utilization of potential profits because of this education and salary gap—decreased cost of medical care, higher income for the physician hiring the PNA, and better earnings for the PNA.

At 3:00 p.m., Ms. Roberts selects another name from the blackboard. "A regular patient of mine," she explains and enters Room 2-E. Inside, a mother waits with a one-year old boy. He seems frightened by the look of the stethoscope. Ms. Roberts hands him a tongue depressor to distract him.

While making her routine examination, she instructs the mother on nutrition. Iron deficiency anemia is a problem with nearly 70 percent of her patients. Normally, Ms. Roberts will diagnose the anemia by means of a blood test and suggest dietary changes, but if the anemia persists (as it does in perhaps 5-10 percent of the cases), she calls in Doctor Berkelhamer.

Ms. Roberts learns from the mother that the baby drinks a quart of milk a day. "Better give him less milk, so he eats more meat with iron in it," Ms. Roberts advises, at the same time she is using an otoscope to examine the boy's ears. She recommends the kind of meat he should have. She also warns the mother against leaving kitchen cleaners on low shelves.

Much of Ms. Roberts' time consists of counseling—dispensing common-sense advice. One advantage a nurse practitioner has over a physician in providing medical care is that she can take much more time to counsel patients. A practicing physician might see five to six thousand patients in a year; a nurse practitioner would see half that number.

"A number of people think the doctor is unapproachable," says Ms. North. "They fear he's too busy to answer their questions. He may be completely open, but they don't want to approach him. But a mother doesn't have any compunction about calling me, or Jean, and asking about her baby's diarrhea or teething."

In an era of depersonalization, medicine can become *more* personalized. Ms. Roberts encourages her patients to call her any time of the day. In a few special instances (although she tries to maintain her privacy), she permits them to phone her at home. She took a special interest in one 13-year-old girl who disliked her mother. Working with Colleen Turnoch, the social worker, Ms. Roberts eventually directed the girl and mother to the proper agency to handle the girl's emotional

problems.

Patients visiting the Clinic for the first time are assigned to one of the three teams (Roberts, Jones, or Sturdivant) and learn they have a primary health care provider instead of a doctor. "Traditionally, when you come to a clinic you want to meet your doctor," says Doctor Berkelhamer. "People in our Clinic may have a doctor, may have a nurse, or they may have a child health associate. We are all different types of health professionals involved in delivering health care."

Patients, however, do not always understand. One mother, after several visits, during which she had been seen by only one person, asked: "When am I going to see this team?"

"We like our patients to relate to one person," continues Doctor Berkelhamer. "This has allowed for much more continuity with the patient. Previously, patients would have been seen by residents in training, who leave at the end of each school year. But as members of a team, though they still may be seen by different residents, they get to know their nurse practitioner. When the resident leaves, she provides the continuity."

"We don't force the PNA on anyone," says Doctor Cobbs, another team member. "Occasionally you get a patient who demands a doctor, so a doctor sees them. But many of the nurse practitioner's patients would rather be seen by her. They tell me quite frankly, 'I want to see Ms. Roberts.' If she is busy, often they wait, which demonstrates her rapport. Sometimes they let me make the examination, as long as I promise to let her come around and say hello."

Doctor Berkelhamer adds: "Patients like to develop personal relationships, but that doesn't necessarily have to be with a doctor. What they need, actually, is some kind of entry into the medical system, with somebody they can trust and relate to. For most people, that person providing entry can be a nurse practitioner."

Although both black and white parents use the Clinic (which has both black and white staff members), patients are not assigned by race. "We don't see ourselves as set apart from our patients," says Ms. North, who is white. "Jean feels comfortable seeing the white middle-class kids from the neighborhood, and I feel comfortable seeing the black ghetto child. It's a hodge-podge, which is the way it should be."

Three-quarters of the problems of those patients seen by Doctor Berkelhamer, or by one of the other physicians, are identical to those seen by Ms. Roberts. Certain problems, however, can best be handled by one or the other. Ms. Roberts is particularly adept at dealing with very young mothers—girls from 12 to 16. Normally, these girls would be seeing pediatricians themselves. As mothers, they must cope not only

their adolescence. Currently, Ms. Roberts and Ms. North are trying to organize young mothers into discussion groups.

Doctor Berkelhamer sees more patients who have chronic diseases or ongoing medical problems that require continuous attention. When a nurse practitioner encounters a case that she thinks is "over her head," she normally turns that case over to the physician. But few Clinic visits fall into this category.

Doctor Berkelhamer explains: "For many years, certain jobs have been relegated to the physician and only recently have physicians and nurses begun to reassess this division of labor. Nurses used to be merely physician's assistants—an extra pair of hands. But nurses can perform many tasks that traditionally have been allocated to physicians. Nurses can use stethoscopes. Nurses can use otoscopes. They can counsel patients on the management of minor illnesses, and they can deal with problems related to day-to-day health care.

"What we see now is parallelization. Although our work overlaps, the nurse certainly can deliver her services in an independent fashion and can provide the primary relationship with many patients."

By 4:00 p.m., the waiting room is deserted. The lights have been turned off in the empty examining rooms. Some members of the team begin to gather in a conference room off the rear corridor to unwind and discuss some of the day's cases. Ms. Roberts has one last patient to see—a 13-year-old girl.

"With adolescents," she explains, "we usually like to have males seen by males and females by females." She chalks her name on the blackboard one last time.

In the conference room Ms. Bollinger organizes file folders into piles, separating no-shows from patients who had been seen. Ms. North speaks with a junior medical student about his cases. Doctor Berkelhamer converses with the residents. Ms. Roberts soon appears and sits down. The day is nearly over.

Leadership on the Roberts Team does not always fall to the same person. "Each of us has varying degrees of professional capabilities," explains Doctor Berkelhamer, "so the person best informed about a case's particular problem takes the lead in that case. Patients who tend to miss appointments are supervised by the social worker. A young mother having difficulty dealing with nutrition would be overseen by the PNA. A child with a disease process would fall within the physician's realm. The ultimate responsibility for total team activities belongs to the attending physician—which on the Roberts Team means me—but I play the role of follower in many situations.

"I find the concept exciting, because I not only have the opportunity

a consultant and an advisor for the nurse practitioner. I also become a referral source for that nurse practitioner on the more difficult medical management problems. I get involved in dealing with complicated medical cases that in another setting I would not see. Many pediatricians in private practice tell me they get unhappy, through the years, with their day-to-day lives, because they no longer use the skills acquired in medical school. Their practice becomes mundane and routine for their level of training. Practicing with a nurse practitioner would open up a whole new world for them and make pediatrics a much more challenging endeavor."

Because Wyler Children's Hospital operates as a teaching unit, it provides many future physicians with dramatic exposure to working with nurse practitioners in modern medical practice. "I wouldn't hesitate for a moment to recommend someone to bring their child to one of our PNAs," says Doctor Cobbs. "They never have any reservations about asking us for help if they see something they can't handle. They do a thorough job. I respect their judgment and their skill."

Doctor Berkelhamer sums up the argument for the use of nurse practitioners in team situations: "Some communities may be able to afford enough physicians so that each family can relate to one doctor. But even if the community could afford that relationship, medical care is becoming more complex. The highly skilled physician finds himself torn between making patient relationships or performing medical care at a high level of excellence. That may mean he has to restrict himself to a specialized area. The day of the family physician who could cure everything is gone. Even general practitioners today are highly specialized physicians. The whole medical care system is going through a reorganization process, and the nurse practitioner is going to achieve increased acceptance in this new role."

H.H.

STANDING ORDERS IN THE MOUNTAINS

To the 5,000 people who live close to the bone of poverty in and around the remote Appalachian community of Briceville, Tennessee, Susan Schweer, R.N., is something more than just a nurse. She is also their physician, their pharmacist, and their family counselor.

Ms. Schweer, an energetic woman of 25, is a nurse practitioner. She manages, at the frantic pace she finds congenial, the People's Health Center of Briceville, a modern clinic dedicated to providing inexpensive care of family-type and acute illnesses. Operating under standing orders formulated collaboratively with her by two general surgeons in Oak Ridge, some 20 mountainous miles to the south, Ms. Schweer personally interviews every patient who walks into the clinic. She takes histories, makes nursing diagnoses, prescribes (and often dispenses) medicines from the clinic's well-stocked pharmacy, answers numerous telephone calls, communicates regularly with any of a dozen cooperating physicians in eastern Tennessee, and levels a mountain of paperwork. This tends to give her a well-filled working day—10 to 16 hours a day five days a week—but she is never too busy to say a friendly word to a visitor or to offer a smile and some practical "big sister" advice to a teenager with a teenage problem.

Sue Schweer is "into" people. She genuinely likes almost everyone she meets. Yet, if there is one thing that turns her extroverted personality sour, it is a situation in which a patient receives perfunctory diagnosis and treatment. The case of a middle-aged woman to be known here as Ms. A. illustrates the kind of thing that turns Ms. Schweer into a talkative tiger.

A couple of years ago, Ms. A. entered a hospital because there was no medical help available in Briceville. "I was bleeding, had hot flashes, was tired all the time, and my weight went down from 115 to 97," she says. "The doctors told me I was going through the change of life and they were giving me hormones and shots for that. They kept me in the hospital 18 days and I was all doped up all the time I was there. Finally, they told me I was going to have a hysterectomy."

At the start of the operation, Ms. A. suffered cardiac arrest. She was revived and sent home. She was told there would be no more operations. The hospital advised her that she would simply have to live with her

problems.

Some months later, Ms. A. came to the new People's Health Center. She was a visitor, not a patient, but Sue Schweer's trained eye followed her.

"I couldn't help noticing the woman," Ms. Schweer says. "She's got a real low voice, dry, scaly skin, and kinky hair. I sat down and talked to her for a while. I learned about her operation. She told me that before entering the hospital her hair had actually straightened out, her skin had turned yellow, and the hair on her legs began to disappear. After a while, something dawned on me. I asked if she had ever had her thyroid checked. She said 'No'."

Ms. Schweer's hunch was correct. A physician to whom Ms. A. was referred did a complete thyroid profile. The diagnosis: Almost no thyroid function. After treatment with the appropriate thyroid medication, Ms. A.'s skin returned to its normal color, her bleeding stopped, and the other symptoms disappeared.

"What bothers me," Ms. Schweer says, "is that she could have died from 'shotgunning.' Nobody sat down to talk to this woman about her life style, why she had dry skin, no energy, and all that. Nobody really cared about her."

Another horror story concerns a child whose finger was mangled in a home accident. The child's parents took him to a physician who simply sewed up the finger. According to the parents, the physician did not check the finger for a complete range of motion, nor did he ask if there was a tingling sensation. If the nurse practitioner had seen the child, she would have quickly called one of the Oak Ridge doctors, who serve as medical preceptors for the People's Health Center—David Stanley, M.D. and Robert Dunlap, M.D. In this unique joint practice situation—unique because Oak Ridge is so far from Briceville—the two physicians back up Ms. Schweer's diagnoses and treatments with a complete set of standing orders and offer unlimited consultation by telephone. Members of this joint practice estimate that approximately 90 percent of the patients can be handled at the clinic, without being referred to a physician.

The reason for the long-distance joint practice is that Briceville cannot support a full-time physician. Briceville, Tennessee, is Appalachia epitomized. It doesn't appear on a map, nor do its neighboring residential areas—Fraterville, Laurel Ridge, Frost Bottom, Pine Hill, Beech Grove, and Duncan Flats. Briceville lies at the foot of the Cumberland Mountains, 30 miles from Knoxville, on Tennessee Highway 116, a narrow, winding road that provides a view of smoky glens, tumbledown shacks, old tires, junked cars, stray dogs, and morose mules. Five hairpin miles later, in Briceville (pop. around 2,000), there is a grocery store, a filling

and headquarters for a Head Start program, and the People's Health Center. Talk to the residents and they will tell you about one more landmark. It's called "rock wall," a stone barrier near the highway, where men from the hills gather the night of welfare-payment day to raise a jug or two and sometimes to create havoc.

Back in the 1940s, Briceville was the wealthiest town in Anderson County, for coal mining was then at its economic peak and the area contained some of the richest coal veins in the country. Now, save for some small strip mining operations, there is no work at all for people in the area. Those who do have jobs—about 80 percent of the people are unemployed—travel to Oak Ridge or Knoxville. The people of Briceville have little education, even less money, and no mobility. (A few of the people who have cars charge anywhere from $3 to $10 for rides to other towns.) Briceville's surrounding hills are somewhat of a throwback to the days of the Hatfields and the McCoys.

What is a nice, modern clinic doing in a place like Briceville? The initial impetus to establish the clinic came from the Vanderbilt University Health Coalition, a group of students in the health professions. Formed in 1969 by two medical students, the coalition's goal was to bring health care services to the rural communities in East Tennessee. In 1970, the coalition developed a summer program that offered free physical examinations to residents of rural communities. The students called their entourage a "health fair." It stayed in each town for one week.

Because a physician had not lived in Briceville for many years, the town became an early stop on the health fair circuit. Student representatives arrived in Briceville in May 1970, to ask the local Parent-Teachers Association for community support of the project. At that time, the association president was a 70-year-old mountaineer named Byrd Duncan, who convinced a wary community that the Vanderbilt students were offering a needed service. Mister Byrd says: "Then people jumped up and organized a health council and elected me president. We made arrangements with local churches to house the students. In July, the students came up with two trailers full of medical equipment. They did physical exams for 1,150 people in one week's time and had to turn away another 800."

When the students left, all that remained was the 20-member People's Health Council, with Mister Byrd as president. But the community had had a taste of good health care and it wanted more. So the council president started talking to officials of the East Tennessee Health Planning Council and the Tennessee Valley Authority (TVA), which often gets involved in community projects. One year later, one of the trailers was brought back to Briceville, courtesy of TVA, which rented the site

Medical staffing was the next problem. At first, Vanderbilt University sent out physicians on a regular basis, while community volunteers kept records, made appointments, and assisted physicians when they came to the clinic. Shortly thereafter, other physicians in the vicinity, including Doctor Stanley and Doctor Dunlap, were asked to help on a volunteer basis. They agreed and Briceville ended up with a physician at least once a week.

Two years later, early in 1973, the East Tennessee Health Planning Council and the TVA asked the Appalachian Regional Commission (ARC) for a grant to make the Briceville clinic a permanent facility. The commission came through with a five-year grant for $25,000 the first year and lesser amounts for each succeeding year.

About the time of the initial grant, the nurse practitioner movement was starting to gain ground in Tennessee. At that time, too, Sue Schweer had finished both undergraduate and graduate studies at Vanderbilt and in August 1972 had enrolled in the university's first nurse practitioner class. After receiving her master's degree, Ms. Schweer started the Medical Nurse Practitioner Program in the Department of Nursing Education at Meharry Medical College in Nashville and ran a night clinic in an East Nashville housing project.

"In July of 1973, I was looking for a job around Knoxville, because my husband and I had just moved there," Ms. Schweer says, "and the People's Health Council of Briceville wanted someone like me because the job description in the ARC grant called for a nurse. I got together with Byrd Duncan. At first, he was afraid people in the hills wouldn't accept me because I had the wrong accent. But he hired me and I've been working here every since."

In March 1975, the old trailer was removed and replaced with a modern prefabricated building. TVA still leases the site to the People's Health Council for $1 a year. The new People's Health Center is approximately 20′ x 80′, has a large, well-furnished waiting room, a reception area, three examining rooms, a laboratory, and two washrooms. It was financed by funds raised from "walks"—in which people sponsor the walkers at so much per mile—in Briceville and surrounding communities and from donations by community organizations, churches, and even TVA employees. In all, some $22,000 was raised—$17,000 for the building and $5,000 for operating and maintaining the clinic.

Ms. Schweer runs the clinic at a pace inconsistent with the slow-moving community way of life. There is no appointment calendar. However, between the hours of 8:30 a.m. and 4:30 p.m., Monday through Friday, she sees about 30 patients a day, on a first-come, first-served basis. The patients are mostly women and children with complaints

"At first," says Ms. Schweer, "people didn't really accept us. We saw maybe three or four patients a day. Now we're understaffed." Helping Ms. Schweer at the clinic are three other employees—a nursing aide, a receptionist-bookkeeper, and a custodian. The nursing aide assists with patient workups by taking temperatures and blood pressures, drawing blood, doing throat cultures in the clinic's small laboratory, and giving shots.

When a patient comes in with a problem not covered by Ms. Schweer's standing orders—an eye, ear, or nose difficulty, for example—she quickly calls the proper physician in Oak Ridge, Lake City, or even Knoxville to set up an appointment.

Ms. Schweer's approach is problem-oriented. This involves identifying both an active and an inactive problem list for each patient. She takes copious notes when talking to a patient so that she can integrate problems related to physical and emotional health and identify social and family factors that affect the patient's life situation. "I think my patients really appreciate this approach," she says. "Anyway, it's a lot different than the 'country-doctor' type of practice, where an overworked physician treats only presenting symptoms and doesn't really have time to talk about a patient's other problems." She adds that, for about 30 percent of the people who come to the clinic, her emphasis is on preventive care.

Ms. Schweer's relationship with patients depends to a great extent on good rapport—her interest in them as human beings. Here is a typical examining-room conversation with an unmarried, middle-aged woman:

Ms. Schweer: Well, you *are* sick. Temperature's at 101. Tell me how you feel.

Patient: Rotten. Aching all over. Coughing a little bit. An upset stomach.

Ms. Schweer: Do you cough up any phlegm at all?

Patient: Yes.

Ms. Schweer: Any vomiting?

Patient: No.

Ms. Schweer: Bad diarrhea? About how many times have you had to go in a day?

Patient: Started this morning. Had to go about 30 times since then.

Ms. Schweer: Have you had a sore throat?

Patient: No.

Ms. Schweer: Ears hurt at all?

Patient: No more than usual.

Ms. Schweer: Been around anyone else that's sick?

Patient: No, but I did walk 11 miles for St. Jude's hospital on Saturday and I got drenched in the rain.

I was going to die. Twelve miles! And Byrd Duncan, no problem. Just whipping around those mountains at 73 years old. Were you sick before the St. Jude's walk?

Patient: No.

The nurse practitioner quickly dispenses the appropriate medication from the pharmacy and explains what she is giving to the patient and why. She then asks the patient to call the clinic in a day or two to check on progress.

Faye Otto, the patient, resides in Clinton, a town ten miles away that has a physician. Why does she come to the People's Health Center? "She seems like she's more interested in you as a person rather than just treating what's the matter with you and seeing you off." And May Smith, another patient, says, "You have to wait too long in a doctor's office and it's too crowded. And I'm a lot freer to talk to Sue. She's great with older people. More relaxed."

House calls are also part of Ms. Schweer's duties. But many of these calls, she feels, are unnecessary. "There isn't enough incentive in the price structure—$5 for an office visit and $6 for a house call—to get these people to come down to the clinic. If they really can't move, I don't mind. But too many simply like the idea of being visited. The extra $1 was originally designed to cover transportation costs, but it sure doesn't cover my time away from the clinic when I go up into the hills. We ought to make the house call fee high enough so there's motivation to come down to the clinic." Ms. Schweer's duties do not normally include visiting patients in hospitals. "I guess I could, and I've followed women through pregnancies a couple of times. But I don't make a practice of it because of lack of time."

Her relationship with hospitals in the area is excellent. On several occasions, she has referred emergency cases directly to the hospital of the patient's choice or to the most convenient one—usually the 20-bed facility in Lake City. The hospitals take her cases immediately. "I've had a number of emergency appendectomies," she says. "Usually, I call Oak Ridge and tell either Doctor Dunlap or Doctor Stanley I've got a hot abdomen coming in. They always tell me to send the person right to the hospital and list him as their patient."

Other services of the People's Health Center include dispensing contraceptives and family planning information, and of course, drugs. Though the People's Health Center does not have a complete pharmacy, it does carry antibiotics, decongestants, medications for hypertension and diabetes, hemmorrhoid ointments, cough medicines, expectorants, antacids, worm medicine, medication for skin rashes, and a complete supply of contraceptives to fulfill the requirement of the Planned

The clinic passes on medicine at the wholesale price plus a 25-cent handling charge. "People just don't have the money to go to a retail pharmacy," explains Ms. Schweer, "and the closest one is five miles away anyway. So we supply the medications at a price they can afford." Contraceptives and family planning information are paid for by the Planned Parenthood Association of the Southern Mountains. "I don't write prescriptions," says Ms. Schweer, "I use Doctor Stanley's standing orders."

Ms. Schweer's day seldom ends at the scheduled hour of 4:30 p.m. Most evenings she works late on management matters, such as checking patient records and payments, corresponding with third-party payers, such as Medicaid and commercial insurance carriers, and writing proposals for further grants-in-aid. Recently, she spent long hours writing a proposal to ARC for supplementary funds needed—as a result of increased costs—for running the clinic.

Like any health professional, Ms. Schweer carries malpractice insurance. "All nurse practitioners I know do. Some clinics buy it, but everyone's got it. We get a much cheaper rate than doctors because none of us has been sued yet. Personally, I carry $500,000 a case, and the insurance covers up to three cases a year. And it not only covers me but anyone working for me in the clinic."

If the insurance aids the mental well-being of the nurse, it is only fair that the Briceville clinic aid the mental health of its patients. In this respect, the People's Health Center has also fulfilled its obligation to the community. Patty Barnett, a young caseworker from the Regional Mental Health Center in Oak Ridge, serves as consultant to the Briceville clinic and sees any patients Ms. Schweer wants her to talk to. Ms. Barnett says mental health is an especially important consideration in a rural mountain area like Briceville, where many illnesses are psychosomatic or are caused by psychological disorders.

"Part of the culture is to complain a lot, so people don't always take each other seriously," Ms. Barnett explains. "There are a lot of people around here with psychosomatic backaches, for example. It's the 'Eastern Kentucky Syndrome,' a carryover from the time when coal miners in Kentucky who worked hard all their lives decided to call it quits by becoming disabled with backaches."

Ms. Barnett remembers one particularly interesting case in which Ms. Schweer's alertness pinpointed a severe psychological disorder. "This middle-aged woman walked in one day and Sue got an eerie feeling because the woman wouldn't communicate, wouldn't talk to anyone. Relatives thought she had had a stroke and hadn't talked much since then. Sue called the doctor that had examined this woman, but couldn't

took her down to the Mental Health Center as an inpatient. Turned out she was hallucinating badly and was psychotic. Despite the fact she had been to doctors, nobody really plowed into what was really bothering this woman."

Doctor Stanley, one of the clinic's two backup physicians, agrees with the positive comments made by clinic patients. "One of the good things about Sue and other nurse practitioners is that they will spend more time on minor illnesses—like giving the mother careful advice on how to take care of a sick child. They are also very conscious of preventive medicine."

Doctor Stanley claims communications with Briceville are no problem: "It works real well. It's important that the nurse recognize her limitations and know when to refer patients immediately, rather than treat them herself. It there's any question, Sue will always refer the patient to a doctor or call a physician about what to do. An excellent example occurred several years ago when another nurse clinician in East Tennessee found a man with an aortic aneurism and referred him right away. The man needed surgery immediately because it was starting to rupture. He got it."

Doctor Stanley, who has practiced general surgery for five and one-half years, became involved in Briceville four years ago, when he started going to the clinic-in-a-trailer once or twice a month, on a voluntary basis. "At the time," he says, "my brother was a Methodist minister there. Also, I was impressed that the people wanted to help themselves, not just sit around and expect someone else to come in and do it all for them. After a while, I felt it was important for Briceville to have a nurse practitioner, because the community could never support a full-time physician. In addition, the people really didn't know how to make appointments with doctors, were somewhat scared of doctors, and don't have the transportation to get to another town."

As to the standing orders used by Ms. Schweer, Doctor Stanley explains that they are really no different than the standing orders a doctor gives a head nurse in a hospital, except, perhaps, more comprehensive. Doctor Stanley notes that the orders for Briceville were actually written by a team of physicians who now review them about once a year. "Since I'm a surgeon, I didn't feel qualified to write all orders—for example, those for eye, ear, nose, or throat problems. Some of my physician friends write those parts. However, we depend on Sue for correct diagnosis. She's been well-trained in this area and does quite well. I have no complaints."

Doctor Stanley and his partner, Doctor Dunlap, visit Briceville one afternoon a month. And so do four other volunteer physicians from the

throat specialists from Oak Ridge; Jack Rule, M.D., a Knoxville ophthalmologist, and Robert Hellman, M.D., a general practitioner from Harriman, Tennessee. Ms. Schweer schedules the patients for these visits. In Doctor Stanley's case, the waiting list usually number about 30. "If anyone needs minor surgery, I'll do it right at the clinic," he says.

There have been few changes in Doctor Stanley's relationship to the medical community as a result of his Briceville affiliation. He does think, however, that some pediatricians in the vicinity have been dubious that a nurse can treat pediatric patients as well as a physician can. "Of course," he adds, "I don't think Sue can either, except for routine things." Doctor Stanley says that physician resistance is not really a serious problem. "Though they are probably concerned about their own patient loads, they have agreed to help Sue in her training."

The relationship between Ms. Schweer and Doctor Stanley falls easily under the joint practice umbrella. "I think of her somewhat between the usual nurse and a medical doctor," he comments. "We talk on the phone about three times a week. I realize she needs more help than another physician. And yet, we help each other out—she brings up questions that keep me on my toes and I supply information and advice."

To keep herself on her toes, Ms. Schweer attends health care seminars given approximately once a month at the University of Tennessee in Knoxville. Subjects are those requested by a group of East Tennessee nurse practitioners who call themselves the Primary Care Group. "We tell the university what we want to hear about," says Ms. Schweer, "and they schedule it. For example, when I first came to Briceville, we had a minor epidemic of worms—all kinds of worms. None of the nurses knew much about worms, because it wasn't dealt with that much in our education. I needed to know what kind of worms to look for, when to worry, what kinds of tests to run, and so forth. In essence, some solid information instead of old wives' tales." The Primary Care Group asked for a workshop on the subject of worms and the university complied by bringing in a specialist to speak on that area of medicine.

Part of Ms. Schweer's earlier training included one summer spent as an assistant to a nurse-midwife in an isolated Kentucky town, called Manchester. "We lived in a little wooden cabin and one of the rooms in the cabin was the clinic. You think Briceville is rural! Man, I walked five miles one day to make a house call and you couldn't drive to that place even in a jeep. But it was good experience, because I was so young. It gave me some needed work experience, because I went from undergraduate right to graduate studies."

What, in Ms. Schweer's opinion, constitutes a nurse practitioner? "It's a nurse who has training in physical assessments," she says, "which

diagnostic aids that nurses have not used historically. We're trained to make a diagnosis, but people don't really accept that phase of our work because it goes beyond what nurses normally do. The only way around it is to be personally capable of asserting yourself."

The one big problem at the People's Health Center is money. It takes about $60,000 a year to run the clinic, yet about half of the patients never pay their bills. Consequently, the clinic depends, to a great extent, on payments from Medicaid, from the United Mine Workers insurance, from the family planning agency, and from the Anderson County Day Care Program, which gives the clinic $7 per child for school physicals. In addition, the local United Fund contributed $5,000 a year.

Ms. Schweer is proud of the fact that she is the first nurse in Tennessee to get Medicaid payments. "But it was an unbelievable hassle," she says. "They had a number of requirements—like we had to have two washrooms. But we got it and one day we may even get payments from Medicare."

Even though the clinic isn't exactly on a sound economic basis, Doctor Stanley sees the People's Health Center as something of a forerunner of things to come in rural, backwoods, inaccessible areas. "Eventually, we might see one general practitioner working full-time with three or four clinics run by nurse practitioners like Sue. The doctor would rotate around to cover a wide geographic area, but the nurse would see most of the patients. This type of joint practice would use our medical personnel effectively. Really effectively."

L.E.

THE ROCHESTER TEAM

Harold H. (Hank) Gardner, M.D., director of the Joseph C. Wilson Health Center, a flourishing nurse-physician joint practice in Rochester, New York, thinks that the essence of joint practice is simply and easily defined. "The important issue," Doctor Gardner says, "is meeting the needs of the consumer, rather than protecting the prerogatives of the medical professional." That means, in his opinion, that professional staff members should perform in whatever ways their skills permit them to. And, he emphatically adds, all physicians hired by the Center must accept the Gardner philosophy on professionals and their status.

Dr. Gardner is a handsome, broad-shouldered six-footer in his thirties, with infectious enthusiasm, a direct and friendly approach, and a firm grasp of medical economics. He is dedicated to the cause of collaborative medicine and sees it as having a decided impact on both the quality and the economics of medical care. Given an opportunity to expound on these views, he grabs a piece of chalk and hurries to a blackboard to outline his points in an eloquent chalk talk.

Paradoxically, this liberated approach to medical practice is flourishing in conservative Rochester, whose metropolitan area population of 710,000 makes it the third largest city in New York. Historically, Rochester has been a paternal, employer-dominated community. (John Gunther once described it as "in a social sense, something of a center of New York feudalism.") Eastman Kodak, which employs 50,000 workers, profoundly affects the life of Rochester as, to a lesser extent, do Xerox, which employs 15,000, General Motors, employing 5,000, and Sybron, 4,000.

For the most part, the city's employers have been footing the bill for the health care services provided there—services that have long been regarded as high caliber. And, over the years, the dominant force in health care insurance has been Blue Cross and Blue Shield (85 percent coverage), through a community-rated program, in which a common premium is paid by all groups enrolled, regardless of their morbidity experience. The community-related program is a product of industry input into the system.

Industry involvement in health care took a new twist in 1968, when, shocked by the escalating cost of hospital care, the city's major em-

ployers decided that changes had to be made. Subsequently, a citizen's advisory committee was formed to study the financing and delivery of health care. The question was what form health care should take in such a city as Rochester.

After a year of study, the committee recommended that Blue Cross and Blue Shield set up a comprehensive prepaid group practice. Some local physicians, however, felt that prepaid group practice was "bad business" and preferred to organize a medical care foundation. "The medical care foundation offered nothing new," Doctor Gardner says. "All it really does is extend Blue Cross and Blue Shield payments to doctors in their offices. The risk for the prepayment phase of the foundation is that of Blue Cross and Blue Shield, not that of the foundation."

Despite some opposition, Blue Cross and Blue Shield established the Genessee Valley Group Health Association in 1971. Additional funding came from a Department of Health, Education, and Welfare grant of $500,000.

The overall plan for developing this prepaid group practice made provision for nurse-physician joint practice—an idea that had taken root in Rochester in the late sixties. At that time, both the Jordan Neighborhood Center, funded by the Office of Economic Opportunity, and the University of Rochester began pairing physicians and nurse clinicians.

Doctor Gardner, a consultant in the planning of the Genessee Valley Group Health Association, was well versed in the concept of joint practice. He had been working with a nurse clinician in his own practice at the University of Rochester, where he had received his medical training —training that included specialization, on a fellowship, in internal medicine and gastroenterology. During his time at the university, Doctor Gardner also directed outpatient services for its Department of Medicine.

It was Doctor Gardner's strong belief in the concept of prepaid group practice that prompted him to leave the university and establish the Joseph C. Wilson Health Center. Its name, which Doctor Gardner chose, honors the founder of the Xerox Corporation, who was, himself, an early advocate of prepaid group practice. The Wilson Center, in which the collaborative concept is basic, opened in 1972. It is located in a large, two-story building, set on four acres of land leased from nearby Rochester General Hospital. The Center is bright and attractively decorated, with huge windows overlooking formally landscaped grounds. The waiting rooms are designed for the comfort of the patients as well as for easy access to offices and examining rooms.

The Center provides comprehensive health care services, except for dental services, to its members for $50 per month. Doctor Gardner notes that Rochester employers usually pay $500 of the annual total of

$600 per member. The full-time staff of the Center comprises 20 individuals, ten of whom are physicians. It has three full-time nurse clinicians who team up, on a one-to-one basis, with physicians in obstetrics/gynecology, internal medicine, and pediatrics. In restating his conviction about professionals and their status, Doctor Gardner wants no misunderstanding: If staff members "do things they can't do and get into trouble, they damned well have to answer to me."

In the spectrum of care, Doctor Gardner estimates 80 percent can be provided by either member of a joint practice team. He considers that he, the physician, is responsible for an area of care at one end of the spectrum and the nurse clinician is responsible for an area at the other end. In that way, he feels, they complement each other and bring to the consumer a broader spectrum of health care. The 80 percent overlap, he adds, gives them flexibility, in terms of how they program their time and how they deal with patients.

This brings up the question of who does what. "I have had training in gastroenterology," Doctor Gardner says, in citing the rationale of patient selection. "I do gastroscopy. The nurse doesn't do that. On the other hand, she has had training in sexual counseling, for example, which I have not had. I handle highly technical medical matters, while she uses her counseling and teaching skills, which include talking to people about their problems. There are, of course, grey areas where our skills, as they grow and develop, begin to encroach more."

Doctor Gardner is a firm believer that a nurse should not become a surrogate physician. "They are not junior doctors," he says. "Some people delegate tasks to them. We don't do that. The nurse clinician performs a very professional set of functions, inherent in the nurse's training and not delegated by the physician. This is hard for physicians to comprehend. It is also difficult for physicians to accept that much of what they do can be performed by nurses."

Helen McNerney, R.N., deputy director at the Wilson Center, agrees. She remembers previous experiences at another Rochester clinic—the Jordan Neighborhood Health Center. Three or four of the physicians, she recalls, worked well with the nurses and helped them develop the concept of the nurse practitioner. There were, however, several physicians who could not accept the team concept.

"We had one physician," she says, "who was one of the finest practitioners in the city. He was giving up his practice and wanted to work in the Jordan Center before retirement. He was used to an office where everyone met his needs immediately. He said, 'This is exactly what I want.' However, it did not work out that way. Some physicians really cannot bear to have the nurse as a colleague."

It's different at the Wilson Center where all physicians must accept

the concept. In the first year of operation, Doctor Gardner notes, more than 30 percent of the primary health services provided were provided by persons other than physicians. "Aside from the improvement in the quality of medical care, you can imagine the financial implications of having 30 percent of the care provided by nurse clinicians, optometrists, and physician's associates," he says. "They cost about half of what a physician would cost, and their productivity is good."

Tabulating the coverage, Doctor Gardner notes that in July 1974, the Center's Department of Medicine had 1,299 patient visits. Doctor Gardner saw 596 patients and his teammate, Marilyn Fiske, saw 140. Together, the team handled 736 patient visits.

In setting up joint practice at the Wilson Center, an early question was the ratio of physicians to nurses: Should it be one nurse to two physicians, two nurses to one physician, or what? "We found that it is not easy to split time. What one really wants is a one-to-one nurse-doctor team functioning in a colleagueship that allows each to practice his or her skills," Doctor Gardner says. He reports that, initially, patients chose to see him. As they began to see the nurse clinician, however, they began calling her rather than Doctor Gardner. "We often consult together," the physician notes. "Frequently, I ask her to spend more time with the patient about problems that surface, or I will spend more time with the patient, depending on the problem."

Doctor Gardner cites an example of their collaboration. "Let's take a case of gastroenteritis," he suggests. "If the nurse clinician saw a patient who had acute intestinal flu with blood in the stool, and she did not know whether it was hemorrhoids, or whatever, she would ask me about it. She would say, 'Mrs. Jones is here. She has had five days of gastroenteritis and fresh blood in the stools for two days. I want you to look at her with me.' Then we would examine the patient together and decide whether the patient should be sigmoidoscoped or brought back for follow-up."

Another example of collaboration would be that of an acutely anxious patient with palpitations. It might be learned during the examination that the patient had problems with her school-age child and marital problems as well. In such a situation, it would be Ms. Fiske who discussed the problems with the patient.

Ms. Fiske sees fewer patients than Doctor Gardner because it takes longer for counseling, education, and management of problems. Doctor Gardner is convinced, however, that these services are more valuable than measuring the blood pressure, listening to the heart, or feeling the prostate gland—which the physician does in some three minutes.

"A 30-year-old woman came in to see Ms. Fiske," he recalls. "She had a temperature of 103° and severe back pain. The nurse looked at

the urine, which showed bacteriuria, pyuria, and many pus cells. She cultured it and asked me to see the patient with her. We essentially made a diagnosis of pyelonephritis. The woman was toxic and dehydrated. We decided to give her intravenous fluids at the Center, rather than put her in the hospital. The nurse arranged to have the public health nurse visit her the next day at home. Again, the diagnosis was really made by the nurse. I was called in to verify it and to initiate the intravenous fluids and antibiotics."

"I treat Ms. Fiske with exactly the same peer status as the physicians. It is this way throughout the building," Doctor Gardner says. "I have discussed this with others who have responded, 'you are insane, you can't do that, the doctors won't buy it, the patients won't buy it.' Well, I didn't get hung up and proceeded anyway."

Ms. Fiske, the other half of the internal medicine team, is a young woman who is deeply committed to her profession and equally convinced of the effectiveness of the joint approach. She was graduated from the University of Rochester School of Nursing, a four-year baccalaureate program, in 1967. "I was very interested in community health, dealing with family problems and family health care," she says. "The Rochester community looked very interesting; the kind of social and medical services it had available was unusual. I met Kay Neil, an unusual, creative woman, who was director of the county public health nursing department, who was trying to devise different ways in which public health nursing could be applied. So I stayed in Rochester and worked as a public health nurse."

Ms. Fiske went to the Jordan Neighborhood Health Center, where she remained for five years. "That was a very exciting time because the government was generous with support," she recalls. "The whole climate reflected the people's right to have good health care. The task was to make such care meaningful and accessible to the people. It was a new role for nursing because we made home visits and also saw patients in the Center." Teams consisting of a physician, a public health nurse, and a family health assistant were developed. Pediatricians were the first physicians involved; later on, other specialties became involved.

"In the baccalaureate program, we learned to use a stethoscope and to take a blood pressure, but heaven forbid you should listen to a heart," she recalls. "In the Jordan Center, the pediatricians taught us that. They were very committed to our learning certain skills and learning the use of the tools. This was the start of the joint approach in the community. Meanwhile, two nurse clinician programs were developed at the university."

After five years at the Jordan Health Center, Ms. Fiske entered a one-year, full-time formal program at the university in order to become a

medical nurse clinician. She then went to the Wilson Center, where the climate for nursing and team relationships are very similar to that of the Jordan Center. On any nurse-physician team, the team members must get to know each other as individuals within their roles as professionals. According to Ms. Fiske, that takes time. "You have to spend time together, learn to communicate, and have a patient load together. In our situation, the discussions began as we faced patient management problems and tried to develop a consistent bilateral process for decision making. This kind of dialogue is crucial and it probably takes a year for the relationship to be really functional."

Ms. Fiske continues to talk about how she and Doctor Gardner work together. "Whoever is free sees the patient," she says. "As you get into the interview, you begin to make certain decisions. For example, if someone came in with abdominal pain for the first time and Doctor Gardner was seeing another patient, I would see the patient and begin taking the history. I would do the necessary physical examination and laboratory tests. When it came to treatment, usually—and especially on the first visit—I would consult with the physician. He would come in and also see the patient."

Ms. Fiske believes that the background training of the physician often presents obstacles to the joint practice. "Physicians are trained to make independent decisions. They are very much alone in that," she says. "They may consult other physicians on a specific problem, but in the day-to-day management of patients, they are on their own. To have a nurse work closely with him around patient management issues can be very threatening to a physician." Ms. Fiske stresses that in working with a nurse clinician, the physician has to change his behavior in some way. The nurse's preparation encourages observation and discourages conclusions and diagnosis. So, if you place a nurse who has learned new skills into this role, she has to assert herself and have the opportunity to demonstrate her competence and develop her self-confidence. Most important, she has to define her nursing role as it differs from the medical role.

How are professional conflicts overcome? The solution, which involves a complicated process, comes from the practitioners' ability to put themselves at risk somewhat. An atmosphere must be developed in which errors can be discussed openly and in which both team members can grow from the experience.

In the early days of working with Doctor Gardner, Ms. Fiske fretted over one particular act. "Doctor Gardner would come in and see the patient I was handling," she recalls. "Sometimes he would repeat the taking of the blood pressure. Now, I have been taking blood pressures for years and years and this really annoyed me. However, if you cannot

discuss something like this, you will never solve it. And the anger goes underneath. Consequently, I asked him why he was taking those blood pressures and said, 'I know how to do them.' His response was, 'I have to do something when I go into the room. I feel better if I can do something.'

"That was interesting, because I had not perceived that as a problem, in terms of his being able to share a practice with a nurse. My perception of the problem was that there was something wrong with me and that he did not trust me. His perception, however, was that he was uncomfortable just standing there with the patient and needed to do something. We worked through that. Now, if he does something, I understand why."

For his part, Doctor Gardner says he feels more secure in taking blood pressures. "It isn't that I don't trust her; it's a mode I have of interacting," he says. "I think the team relationship shouldn't compromise that. I want to look at the trichomonas when they're there, as she does. And I'm more apt to remember the blood pressure when I see that patient the next time."

Most of the patient problems Ms. Fiske deals with are of a psychosocial nature. "What you can do is help the patient adjust to what is happening around him or her," she says. "You cannot change the housing or job situation, perhaps, but you can help the patient's reaction to it."

Ms. Fiske remembers one woman with degenerative arthritis. This was doubly disturbing because she had always been active in sports. "I was trying to think of ways to help her," she says. "I felt frustrated because of her frustration. She went away in tears. But when she returned to see me for a follow-up, she said, 'The last time I saw you, I felt as though you felt that I was a crybaby, and that I was making more of my symptoms than they really were.' Now that was a really positive thing to say—that she could comment and say she was angry with me because she felt I wasn't sensitive to her. That was a positive relationship. Although we didn't come up with any better ideas to solve the problem, it was important that she came and told me how she felt."

As for relationships with Rochester hospitals, Ms. Fiske says, it varies. "However, I make visits on the floor," Ms. Fiske says. "I state who I am and my relationship to the patient. That has not been much of a problem. In none of the hospitals do we have formal visiting privileges, but we do indeed visit. We do not write nursing orders, as such, but that will come." Relationships between ambulatory nurse clinicians and in-hospital nurses have not yet begun to develop. Together, we share a vast scope of health services to offer the patient. We have yet to learn to coordinate and combine our services. Community health nursing is

an integral part of ambulatory health services, and relationships are well established between nurse clinicians and community health nursing in our setting."

Both Doctor Gardner and Ms. Fiske believe the joint practice approach will be increasingly adopted. "Joint practice is the only way to go," says Ms. Fiske. "I think people need both specialties to provide care for them." And Doctor Gardner says, "In terms of health organization, joint practice ought to thrive because there is a financial incentive to use it." He adds that patient reaction to the joint approach at the Wilson Center has been quite positive and that data are now being collected on this subject. "This isn't an experiment," he emphasizes. "It's working, and the consumers are sufficiently satisfied so that it is growing. We started the Center with 800 members. We now have 11,000 members and 16,000 patients. The other patients are a combination of fee-for-service patients—Medicare, Medicaid, and walk-ins."

In it's first year, Doctor Gardner points out the Center was able to reduce the number of hospital days per year per 1,000 persons to 400, compared to the Blue Cross figure of 800. "Since Blue Cross in Rochester runs about $200 million yearly in hospital costs, you can see what this means, in terms of reducing that cost by half," Doctor Gardner says.

One problem yet to be solved is the question of a partnership between nurse and physician. At present, nurses and physicians cannot enter into a legal partnership in New York State. But, Doctor Gardner says, "We're going to attempt to change that law."

A.G.

A MATTER OF SURVIVAL

Joint practice—the procedure that enables registered nurses to become more truly involved as practitioners in patient care—forced itself upon Fred Z. White, M.D., some years ago as a matter of survival. It was either adapt and innovate or turn several hundred dependent patients adrift.

For some 18 years, Doctor White had shared a clinic practice with an older associate, Frank Green, M.D., in Chillicothe, a small town in north-central Illinois. Then, in 1969, Doctor Green died, and Doctor White found himself with a suddenly doubled patient load—about 70 to 80 patients a day. His only acceptable choice, and the one he made, was to ask the two registered nurses at the clinic—Melba Jury and Judy Koch—to take more active roles in patient management. The nurses' new duties included (and still do) making physical assessments of patients, taking medical histories, screening telephone calls, and conducting physical examinations, when such an examination was a routine one required for school, insurance, or industrial employment.

The team approach that Doctor White thus introduced into his practice was an almost immediate success. After two years, it was operating so smoothly that Doctor White felt that he could safely devote half of his time to teaching. Accordingly, he accepted the co-directorship of the Family Practice Residency Program at Methodist Hospital of Central Illinois in Peoria, around 20 miles to the south, where he undertook five weekday morning classes for residents. Shortly thereafter, Doctor White found what he had, understandably, been looking for—a new associate. He was Conrad Thomas, M.D. His arrival returned the clinic to full strength, and more. Doctor Thomas became a member of the team. The nurses retained their team positions. Joint practice was no longer a stopgap but a vigorous force in community health care.

Doctor White thinks of his team as a team, and he explains it with a baseball analogy. "A team, whether it be a baseball team or a health care team, has several routes of action, regardless of function, that lead to a common purpose or goal. In our case, the goal is to deliver health care to a community; in the case of a baseball team, the defensive goal is to prevent the opposing team from scoring. Positions of ballplayers on the field vary, depending on whether there are men on base, how

the pitcher will pitch to a certain hitter, or whether the ball is hit to the infield or outfield. In a like manner, the roles of different members of the health care team must change in response to the problem they are considering."

Given the changing-role theory, Nurses Koch and Jury began to function even more independently in 1971 than they had two years earlier, when the team concept was initiated. They assessed obvious injuries, such as a broken ankle or a pitchfork-through-the-foot, and took responsibility for the chronically ill. They also checked pap tests for repeat patients and performed tests for diabetes and hypertension.

In the Chillicothe clinic, the team concept extends throughout the staff. For example, the laboratory technician, named Robert Strong, a 15-year veteran of the clinic considers himself part of the new-look medical team also. "Nowadays, if a school injury case comes up," he says, "I routinely do an x-ray. The nurses and I just agree on the necessity. It used to take a doctor's order for a simple lab test or x-ray." They do this under the doctor's standing orders.

With a combined total of 31 years of experience, the two clinic nurses are contributing even more to the team effort as time goes on. "Right now," says Doctor White, "the nurses are treating two hyperthyroid patients. They see them once a month to check weight, blood pressure, and pulse and to adjust medications per my instructions."

As for prescriptions, the clinic has a set procedure. Nurses do not ordinarily prescribe new medications. However, if the patient is already under the care of the clinic staff and if the nurse knows the case, she does not hesitate to reorder a prescription.

Ms. Koch offers a good example of the new "take-charge" philosophy. "One morning, I was screening a phone call from a patient (actually the second screening, since the office secretary takes calls initially), when I heard him cough violently. That alerted me. I thought he might be sicker than he thought. I asked him how his chest felt. He said his chest seemed to be filling up with fluid. At the time, there happened to be no doctor in the office, so I told him to go directly to the emergency ward at the hospital, instead of waiting for a house call from a doctor. Turned out he was suffering from congestive heart failure."

Such a situation can occur again in the future. If it does, the clinic's nurses are likely to be even better equipped to handle it because of their commitment to a program of continuing education outside the office. Both nurses, for example, have taken a six-week course in physical assessments through the Area Health Education System office in Peoria. Held at Methodist Hospital and at the Peoria School of Medicine at Bradley University, the course covers analyses of patients who have been seen by a physician in the previous year or two. Included were

lectures on disease management, chronic diseases, acute injuries, and trauma.

An unusual aspect of this team effort is that the nurses make occasional house calls, though usually of a fairly perfunctory nature. "We give shots to patients who aren't able to come into the office or check blood pressure and pulse," Ms. Koch says. "However, we don't make hospital visits." Doctor White has no objections to having nurses make such visits, but the hospital is too far from his clinic. And, of course, he is at the hospital half of the time himself.

The charge for a nurse's house call is one dollar less than the charge for a physician's call. Doctor White thinks the fee should be the same in either case, but he realizes that patients do not always see it that way. Reducing the charge by a relatively insignificant amount allows the clinic to engage in some psychological education of the community. In essence, Chillicothe residents are being told: "Okay, we'll go along with your opinion that a physician's fee should be a bit more than a nurse's for a house call, but, in reality, the service is the same."

The difference between charges for house calls brings Doctor White to his pet theme. If a nurse does the same thing that I do, then the nurse ought to charge the same thing that I charge. If you go into a filling station and have your oil changed, it doesn't make a lot of difference whether the boss changes the oil or a pump jockey does it. The important thing is the service itself. Same thing at a doctor's office. If you've got a sore throat and you want evaluation and treatment, it shouldn't make a difference whether the nurse or the doctor does it."

But what about quality of care? "Even better," Doctor White says. "Let's suppose a hypertensive patient comes in for the first time and you'd like to know what his blood pressure does in response to medication. Under the traditional system, a doctor might ask him to come back in a month, and it might take several months before the case was finally controlled. Working with our team of nurses, we can get the hypertensive person back more frequently (because more practitioners are available to see that person), can monitor him more closely, and still get the same results on which to base a determination—all in less time."

Ms. Koch gives another reason for the better quality of care. "We're more observant now than we were before. And the reason is not that we weren't always able to physically assess patients. It's just that we weren't allowed to."

How do the nurses react to the idea of more independence? Ms. Koch says that even after four years, she is still excited about it. "I've gotten calls in the middle of the night and I'm happy to answer ques-

tions and provide assistance. We feel that we can do more now in taking the burden off the doctors. When someone comes in and says he or she has a problem—say a young married woman wants to talk about birth control—the person will accept our advice. In fact, the entire community has become accustomed to the fact that nurses as well as doctors can provide this type of service." (In one 20-day period last February, the two nurses saw and treated 263 patients, without any assistance from a physician.) Ms. Jury adds that many clinic regulars have said to her: "Why didn't you start doing this a long time ago? You've been here long enough to know what's going on."

Ms. Jury thinks that one important benefit of the team effort, from the patient's viewpoint, is that joint practice means that a patient does not have to wait hours to see a physician. "I can screen a number of people quickly," she says. "If the child or adult is really sick, or if I don't know the answer to a question, I'll interrupt the doctor or ask the patient to return the next day if the case isn't serious."

Linda Reeves, a young mother who has been coming to the clinic for the past six years, certainly likes the idea of shorter waits. "My son took sick this morning and I brought him in," Mrs. Reeves said. "I wasn't in the waiting room more than five minutes before Melba examined him. Years ago, the doctor didn't have time and I might have waited for hours."

The team effort not only makes it possible for the staff to see people more frequently, but it also makes it possible to see more people. This means, of course, that the clinic is currently handling considerably more patients than before. It now takes two full-time employees to keep track of the approximately 10,000 patient records; a 10 to 15 percent increase over five years ago.

Everyone—physicians, nurses, other staff members, and patients—thinks that the joint practice is a success. But how to prove it? In 1973, Doctor White decided that a study of a commonly-recurring illness in the community and of its management by his group would prove the effectiveness of joint practice.

His reasoning went something like this: Much of a family physician's time is programmed for doing periodic health assessments and physical examinations, duties that mean the scheduling of appointments far in advance. An additional segment of his time is taken up in discussion with individual patients or in counseling on family problems. As a result of the almost automatic programming of a physician's time, any additional, unprogrammed work—caused by an epidemic, for example—puts a strain on the whole system. When faced with an epidemic, the physician has to reduce his health maintenance and preventive disease activities. What then could be a better test of the team concept than

team management of an epidemic-type illness, with minimal involvement of physicians?

In setting up his study, Doctor White looked at the community itself. Chillicothe is a small (pop. 6,000), semi-rural, lower-middle-class town 20 miles from a fairly large city, Peoria. Chillicothe residents work at either farming or industrial jobs; the general level of education is not very high. Next, Doctor White listed the available team members: Two physicians, two registered nurses, a medical technologist, and five office assistants. Then he selected the commonly-recurring problem—the sore throat.

Doctor White's plan was to diagnose and manage this particular illness over an eight-month period, using the team approach. He would then evaluate the results in terms of: (1) quality of care, (2) patient acceptance of the team approach, and (3) cost of care to the patient population. His goal was proof that one health care problem can be managed more effectively at less cost to residents of the community by a task-oriented team than by a physician alone.

In putting the plan into effect, the clinic team decided together which of the tasks involved in managing sore throats would be handled by which member of the team. A diagnostic and treatment protocol was then developed. Here is how it worked:

The patient was seen by a nurse, who performed an initial evaluation. The evaluation included a history of the present illness and a physical assessment. Problems outside the established protocol—pencillin allergy, for example—were referred to one of the physicians. If nothing within the protocol was identified, the nurse performed a throat swab. If the patient's symptoms seemed severe, she also prescribed a palliative medication consisting of a specified analgesic and decongestant combination. If the throat culture proved positive, the second step of the protocol was begun. The patient was treated with appropriate medication and all family members were called in for throat cultures. In all cases, the purpose of these actions—to control the epidemic—was explained to patients and their families in both oral and written form.

Patients were charged at the rate of $5 for the nurse's evaluation and $2 per throat culture. There was no charge for test-of-cure cultures (which were always obtained following ten days of treatment) or for cultures from asymptomatic family members, when no evaluations were required. The latter cultures were usually taken by the medical technologist.

With this protocol established, the clinic's physicians seldom needed to be involved in the diagnosis, treatment, or management of sore throat cases. If a patient questioned the procedure at any time, however, he was immediately referred to one of the physicians. Doctor White notes that

only rarely were patients referred to him or to Doctor Thomas.

From September 1, 1973, to May 1, 1974, a total of 1,194 sore throat patients were managed by the team, with little active help from either of the clinic's physicians. These patients were treated for ten days, with either oral penicillin or an injection of benzathine penicillin G. Of those patients seen, 199 were found to have positive cultures and were asked to bring family members in. Fifty-two family members were found to be carriers and received appropriate treatment.

Doctor White says that data accumulated from the experiment showed that the quality of care rendered by the team was as good as that offered by the same office under previous, traditional methods. The acceptance of the team by patients was somewhat difficult to assess. The indications were, however, that patients appreciated the thoroughness of the procedures and the quick access to treatment under the team approach.

Perhaps the most noteworthy findings of the study appeared in the area of cost. Since the fee for seeing a nurse was $5 and throat cultures were billed at $2 each, the eight-month total cost to patients breaks out like this:

1,194 patients evaluated @ $5 each	$5,970
1,194 throat cultures @ $2 each	2,388
408 family members' throat cultures at $2 each	816
Total cost to patient population	$9,174

Under the traditional office procedure, the physician would have seen all 1,194 of the patients and would have charged $6 for each of the evaluations. This $6 charge would have resulted in an extra cost of $1,194 to the patient population, not to mention loss of the physician's time—hours that might have been channelled into more productive areas of health maintenance and disease prevention.

Even more significant, perhaps, is the fact that there were really 1,753 patient encounters during the eight-month period, if test-of-cure cultures and cultures of asymptomatic family members are included. Working with the cost model and assuming, again, that the physician would have seen all of these people, corresponding cost figures would be:

1,753 patients evaluated @ $6 each	$10,518
1,753 throat cultures @ $2 each	3,506
Total cost to patient population	$14,024

It is easy to see that if traditional methods had been followed during the eight months of the experiment, the total extra cost to patients would have amounted to $4,850.

In summing up the experiment, Doctor White remarks that "by addressing themselves to a single health care problem, a team of functioning professionals in a practice setting was able to divide the diagnosis, treat-

ment, and management of the problem into simple tasks. With the protocol developed, the problem was appropriately and efficiently managed by the health care team."

As it turns out, the experiment had another unexpected benefit. It solidified the nurses' own positive attitude toward the team relationship. Doctor White comments that "the nurses are beginning to feel that the life and career for them can be more than simply doing the menial sort of housekeeping chores they did in the past and that the training they spent years acquiring is really beginning to pay off in terms of job satisfaction and self-fulfillment." Ms. Jury, who has been a member of the clinic staff since 1951, would be the first to agree. "We used to spend most of our time doing x-rays and lab work," she recalls. "That's not the case now."

With reference to his own attitude, Doctor White says the biggest hurdle he had was learning to "let go" of certain things. "Not too long ago, physicians insisted on taking blood pressures themselves. Now almost everyone agrees that a nurse can do that every bit as well."

As a result of his experience with joint practice, Doctor White has started an innovative training program, with monthly sessions for his own two nurses and for other registered nurses in the county. The first session attracted 26 nurses from physicians' offices. In the future the program will present timely medical topics, and common problems, such as skin diseases.

The monthly sessions also have a second function, that is, to provide the clinic nurses with peer support. "Nurses in hospitals have other nurses they can relate to and gain support from," Doctor White says. "An office nurse, though, has few peers and generally feels pretty isolated—though in our case the two nurses provide a certain amount of support to each other. By holding monthly meetings for a number of office nurses, the group can compare notes and perceptions and they often find others hold the same constructive ideas."

Ms. Koch says that other area nurses have become interested in the idea of joint practice through the monthly meetings. As for herself, the meetings have stimulated her interest in reading more extensively in the medical literature.

The question of legality of a joint practice is answered by Doctor White with complete candor. "If a nurse 'diagnoses' a patient, that's not allowed according to the state medical practice act. If she 'assesses' a patient, that's legal. It's all a matter of semantics." Doctor White notes that he has not been advised to adjust his malpractice insurance because of joint practice activities nor has he been threatened with lawsuits because nurses have assumed more responsibility. He feels, with reason, that he has a winning team. L.E.

THEY TAKE TIME TO TALK TO YOU

Anacostia, in Washington, D.C., is a poor black ghetto, but a ghetto with a difference. It has, in its squalid midst, the Marbury Plaza, an imposingly handsome high-rise apartment complex with a total of 664 units, and tucked away in one of its buildings, in Unit B-1, a basement space once occupied by a delicatessen, is a pediatric practice that attracts patients not only from the Anacostia neighborhood but also from as far as suburban Maryland.

This practice is a joint practice, a young and flourishing collaboration between Robert Dickey, M.D., and Pamela Tucker, R.N., a pediatric nurse practitioner. Doctor Dickey is an easygoing man in his mid-30s, whose office uniform is a checked sport shirt and nondescript brown trousers. He has a round face and wears plastic-rimmed glasses. His 135 pounds fit well on his spare 5 foot 6 inch frame. He has no trouble keeping slim, because he does not care much about food. Every day for the past three years, Doctor Dickey has carried the same lunch to work: A peanut butter sandwich on white bread.

Ms. Tucker is just 30, and is as tall as Doctor Dickey. Her office uniform consists of pants and a short yellow tunic studded with a patchwork of bright designs that babies enjoy: A banana, a rooster, a carrot. She wears her ash-blond hair parted in the middle and pulled back tightly. Her glasses are small and round and have metal frames. Unlike Doctor Dickey, she varies the sandwiches she carries to the office and supplements them with cashew nuts, oranges, raisins, and carrot sticks.

Doctor Dickey and Ms. Tucker met in the emergency room of Children's Hospital National Medical Center in a shabby corner of Washington. Doctor Dickey was completing his residency there and Ms. Tucker was working as a nurse. Doctor Dickey had become favorably impressed by the nurse practitioner concept during his residency, and he responded enthusiastically when Ms. Tucker asked him to sponsor her in the program. "I'll be glad to do it," he said, "but I don't know when I'll be able to pay your salary." As it turned out, it took six months for her to collect a paycheck. But then the practice doubled, then quadrupled, and then quadrupled again.

Doctor Dickey and Ms. Tucker have unusual backgrounds. He grew up in the tiny Minnesota town of Cottonwood (pop. 600), where his father

was the station agent for the Great Northern Railroad. "Dad was a union man and probably the only Democrat in town, so he was considered a Bolshevik," he says. "My mother was a deeply religious Holy Roller and at nine I was going to revival meetings and 'speaking in tongues.'"

An excellent student, Doctor Dickey had no trouble earning an engineering degree at the University of Minnesota and a master's degree in chemical engineering from Massachusetts Institute of Technology. He left MIT for a job with the Central Intelligence Agency. "I worked as an analyst in my specialty for four years at the headquarters in McLean, Virginia," he says. "It was stimulating, but stifling. The technical aspects were fascinating, but the personal aspects weren't. I was just a cog in a big machine. I saved my money for I realized that I didn't want to be doing this forever. What I really wanted to do, I realized, was be a doctor. After four years with the agency, I entered the University of Minnesota Medical School."

At the end of his first year of medical school, Doctor Dickey married. His wife, Sharon, had worked as a computer programmer for the CIA. "Medical school was hell," Doctor Dickey says. "It was hard and I hated it. Minnesota was very academic and I was interested in treating sick children. I had worked with Indian children and black children, and I knew that's what I wanted to do—they were sicker than most. So when it came to my internship and residency, I chose Children's Hospital, in Washington. I knew that would give me the experience I wanted. Children's is affiliated with George Washington University, but it's the reverse of academic. I knew I'd see lots of challengingly sick patients. I wanted to see asthma, skin rashes, ear infections. And I got my wish.

"Most of our patients were poor and black, and I got to know them at the hospital. I looked at where they came from and decided that's where I wanted to set up my practice."

Ms. Tucker, who once wrote for a feminist newspaper in Washington called *Off Our Backs,* got into nursing because of a ninth-grade counselor in Kansas City, Missouri, where she grew up. "He told me that only two careers were open to women, teaching or nursing," she recalls with some acerbity. "And since I was afraid to stand up and speak before a class I chose nursing."

Ms. Tucker's entire career up to now appears to have been a search. After receiving a bachelor of science in nursing from the University of Missouri, in 1967, she wandered through Europe and ended up as a nurse on an Israeli kibbutz in Nazareth. From there, she went to work for a pediatric allergist in San Francisco, to Stanford Children's Convalescent Hospital, and to the Santa Clara (Calif.) County Public Health Department, where she worked in well-baby clinics and helped with family planning.

"I think I wanted to be a nurse practitioner all along, but I didn't know how to do it," says Ms. Tucker. "While working as a public health nurse, I helped set up the People's Medical Center, a community clinic for Chicanos, in Redwood City. After my regular workday, I worked in the clinic at night for free. Then I took a full-time job there for $200 a month for six months. I wanted to do more than nurses do in a traditional clinic, and I managed to learn from the doctors."

Continuing her search, Ms. Tucker joined an agricultural cooperative of poor Chicano farmers in the mountains of Northern New Mexico. "In the mornings I'd feed the pigs. Afternoons and evenings, I helped deliver babies and worked in the co-op clinic and emergency room. I got no salary, but was given gas for my car, food, and a place to sleep in a family's house."

After nine months in New Mexico, Ms. Tucker wandered down the road again in her 1962 Volkswagon. Finally, with her savings exhausted, she took a job in the Washington hospital where she met Doctor Dickey. In September 1973, she took a four-month nurse practitioner course at Good Samaritan Hospital in Phoenix. With a dozen women, she listened to lectures on various aspects of pediatrics and attended clinics at the county hospital. She decided she had come to the end of her search.

"I really learned a lot about outpatient pediatrics," she says. "I'm no longer embarrassed to tell my neighbors that I'm a nurse for fear they'd ask me something and I wouldn't know the answer."

While Ms. Tucker was attending classes, Doctor Dickey had moved into the basement of the Marbury Plaza. He says: "I borrowed $8,000 from my father-in-law, a semi-retired architect, and spent $5,000 on a contractor to put up the partitions. I thought the remodeling was expensive, for we weren't using all of our 1,700 square feet at once. We have four examining rooms, a waiting room, an office, and a lab. To save money, we brought old rugs from home. I made four examining tables from wood and my wife upholstered their tops with orange, plastic padding. I did the wallpapering with my wife's help. I put in an answering machine that would give my home number, when nobody was in the office, and my wife would take the messages."

Fortunately, a pediatrician's necessary equipment is not expensive. "It didn't cost much to buy a baby scale, tongue blades, cotton, and some alcohol," he says. "To help pay the operating expenses, I took a part-time job in a cystic fibrosis clinic—a disease I had become interested in during my last year as a resident."

Joined by the unpaid Ms. Tucker, Doctor Dickey had plenty of time to design a medical record system. He considers it unique. "We cannibalized from the best of all other systems." It is Doctor Dickey's complaint, and he shares it with many other physicians, "that with tra-

ditional records there's so much writing involved that you can't see what's wrong with a patient." And the writing is tedious and time-consuming.

What Doctor Dickey and Ms. Tucker did was mimeograph nine different forms on half sheets of paper. These were Scotch-taped, as needed, into a covering made from half a file folder, one for each child. The various half folders of siblings were then assembled loosely in a whole file folder that bore the name of the mother. ("In this practice," he says, "it's possible for three siblings to have three different fathers.") Taped to the inside of the larger family folder were a couple of forms for family history. The Dickey-Tucker forms minimize the need for writing and serve as a reminder to perform necessary examinations and screenings and to ask the necessary questions for a complete history.

"If I write something down that means there's something wrong—and that isn't always true of the more traditional record," he says.

"On the left side of the child's history folder, we attach three forms that serve as a problem and therapy index. By looking at them I can instantly see anything unusual in the child's history and make sure he is developing properly. The dates stand out sharply as to when we should do our next screenings—say for lead, hematocrit, or vision."

One form, for example, marked "acute illness visit," has 29 key words, such as fever, headache, sleepy, irritable, anorexia, and coryza, each followed by a checkoff box. Doctor Dickey and Ms. Tucker check the box appropriate to the patient's problem, and if necessary, make a brief comment.

There are other forms for the patient's history, for a well-child visit, for a well-infant visit, and for an adolescent visit, to be affixed atop the previous records of old visits as needed. For example, on the patient history form, under "prenatal influences," the examiner might check "drugs" and note "Gant (for Gantrisin) and "Fe" (for iron). Under "labor and delivery," the examiner might check "asphyxia," noting "WHC Hosp." (the name of the hospital) and "prematurity," noting the weight. Hospitalizations are described tersely in blank space: "Mo: HBP-meds-hosp 1 wk," meaning that the baby's mother was hospitalized a week for hypertension and received medication.

The system has worked out well. Doctor Dickey feels, however, that he can further improve it. "I want to put all the patient records onto computer discs, with random access. Right now, it's too hard to extract information from the records. Pam tried to audit them and it took her three weeks to do only a hundred charts. A computer could do the whole thing in minutes and also print out letters to patients telling them that they are due back for a return visit. And I could press a key and instantly see on the screen how many asthmatics I have, when they

were here last, and how many acute episodes they have had in the last six months."

This desire of Doctor Dickey's is not exactly a pipe dream. His wife, after all, is a topnotch computer programmer, and he is trained as an engineer. Actually, the new record system was designed as it was so that it could easily be programmed into a computer. "It's not real expensive to put a computer terminal together from a kit," says Doctor Dickey. "I've done stuff like that. All I need is an institution with some unused computer capacity."

In their working relations, Doctor Dickey and Ms. Tucker are remarkably equal. "I don't work *for* him, I work *with* him," she says. "Bob empties the trash and cleans up a room after a child throws up. If he sees a baby, he does *everything* himself. He weighs the baby, gives it shots, and explains things to the parents."

Such unusual democracy in a medical setting can be upsetting to a newcomer. Recently, Doctor Dickey took, as a partner, a young black physician named Karyl Z. Fowler, who had served with him at Children's Hospital. "It takes some getting used to," admits Doctor Fowler, "to hear a nurse practitioner tell you, 'I don't agree with your diagnosis.' After all, I'm the one who went to medical school. But I think it's great. At first I didn't know what to think when I'd ask Pam to do a hematocrit or an audiometric screening and she'd reply: 'I'm busy. I'm seeing a patient.' But I'm gradually getting used to it."

The relationship between Ms. Tucker and Doctor Dickey is one of mutual trust; the relationship between the nurse practitioner and Doctor Fowler is still shaping up.

Doctor Fowler, like many new physicians, is convinced of the value of nurse practitioners. "With Pam, we can deliver much better care. She can talk to our patients in much greater detail and she also has more time to explain the disease process. She's better organized in making a follow-up plan and in making sure continuity is maintained. Frequently, Pam will go over the data from outside labs and pick up abnormal positives, and she'll call that to our attention so we can repeat the test."

Doctor Dickey and Doctor Fowler expect in time to hire one or two more nurse practitioners. They believe their practice will ultimately be able to support another pediatrician, too. "Right now, we're seeing 20 families a day, 25-30 children, and the number has been increasing weekly—all by word-of-mouth," Doctor Dickey says, pointing to a climbing graph. "We can take care of at least twice as many more, but I want to think about that. I'm not interested in just making a lot of money. I want to have time for my family and for my other interests."

With the money starting to come in, Doctor Dickey is able to pay Ms. Tucker a salary of $13,000 a year. He has also paid up the six months'

salary he owed her. In addition, he has begun the remodeling of the rest of the office—adding more examining rooms, a treatment room, and a proper laboratory. Money that Doctor Fowler is investing helps to pay for the materials.

Well patients, with appointments, may be seen by either the two physicians or by the nurse practitioner. The receptionist, the only other employee, fills out a folder and determines the income range of patients who can afford to pay. The fee schedule ranges from a low of $4 a visit for families with an income of less than $10,000 to a high of $15 for families earning over $22,000. That is for first visits. Subsequent visits cost less.

The charge is the same, whether a child is seen by a physician or by the nurse practitioner. "However," Ms. Tucker says. "Bob is scrupulously careful to subtract the time that I spent with a child when a Medicaid form asks about the length of time a *doctor* spent with a patient." Since she is likely to take substantially more time with a patient, when her time is counted, it is counted as "average" rather than "extended," so it won't necessitate a higher fee.

Most patients accept Ms. Tucker's services readily, although one mother, a former Air Force nurse, whose baby she had seen several times, finally spoke up and said she preferred "a real doctor."

"I used to wear a badge that said 'pediatric nurse practitioner,'" Ms. Tucker says, "but I took it off. I felt it didn't explain my role. Maybe one out of five patients will ask what I am. When I call Bob or Karyl in to check a baby's hips or heart they'll ask: 'Are you a medical student, or what?' But most of our patients have been bounced around so much at clinics, from doctor to doctor, that they're glad to have someone like me to latch on to no matter what I'm called."

The office routine at Marbury Plaza is so informal that all three practitioners—doctors and nurse alike—may wind up seeing the same patient. They confer in the hallway about an 11-year-old girl who has pubic hair but no menses. A mother had brought the girl in two weeks earlier, along with her 10-year-old sister, when both suffered sore throats. This is their first well-child visit. "I called Pam in when the older child was squeamish about having her chest examined," Doctor Dickey says. "Now Pam is going to talk to her about menstruation."

The pediatrician also regards Ms. Tucker as a patient advocate—a contribution that is enormously important. "Pam has good sense," he says. "If she has an idea, we listen. She kept asking me for months, 'When are we going to get our screening sheets? When are we getting our audiometer?' So we finally did. And she wanted to know if we shouldn't be treating the kids below the seventh percentile of hematocrit. I said that was too much iron for them. But I reread the literature and

changed my mind. Now we're treating a few kids in the seventh, particularly those with lousy appetites."

In an examining room, Ms. Tucker finishes up a well-baby checkup. The room reflects her personality. One of the wall displays is a large batik that she made herself. Another displays a hand-lettered poster she made. It reads:

People are living
Inside those children's skins.
Thoughts are forming
Behind those eyes.
Handle with care.

Next to the examining table is a gallery of baby pictures—all of them patients and all with their names inscribed. The parents contributed the photographs.

The mother of the baby that Ms. Tucker is examining comments that she heard about the new doctor from a girl friend. "I like it here," she says. "I feel comfortable here. They take time to talk to you. Recently, I called at 2:00 in the morning, and the doctor taking the calls (Doctor Dickey and Doctor Fowler rotate night and Sunday duty) gave me advice and told me to call again if the baby wasn't better. Not many doctors will do that."

Finishing with the baby, Ms. Tucker calls in Doctor Dickey to take a look at the child. The baby once had a convulsion and phenobarbital had been prescribed. An EEG did not, however, show anything. Doctor Dickey prescribes some more phenobarbital.

Ms. Tucker writes a limited number of prescriptions for such things as penicillin, iron, and lotions with Doctor Dickey's signature. The number is limited because she does not usually see sick children.

"Ideally," Doctor Dickey says, "Pam will see this baby the next time at six months and do a Denver Developmental." Turning back to the mother, he shows her a little hand grinder that he recommends she buy so that she can prepare ordinary table foods for the child. But if Doctor Dickey hadn't done that, Ms. Tucker would have.

In the hallway, Ms. Tucker offers some self criticism: "When starting to examine a child, I sometimes get a feeling of something being wrong and stop. I should go on. Last week, for instance, I saw a 14-year-old girl whose periods hadn't started yet. She had been kept back several grades in school. I thought those facts explained her trouble so instead of continuing my exam on her, I called in Karyl and said, 'There's some sort of a syndrome here.' He found a heart murmur, which I could have found. He also found that she had a large labia and no pubic hair, which I could have noted. I should have examined her more fully. And I will the next time. You never stop learning."

The closeness with which the nurse practitioner works with the two physicians is readily apparent. Ms. Tucker examines a six-year-old girl who has a rash on her back. "It's pityriasis rosea," she tells the mother, "and it'll go away in a couple of weeks. It's caused by a virus. But let me have the doctor take a look at it."

"Yes, that's what it is," Doctor Dickey says. "We could give her a little Benadryl. Is she *really* scratching? No? Then we won't fool with it."

While Doctor Dickey continues his examination, checking the child's throat, eyes, and neck glands, Ms. Tucker is talking to the mother. "Give her cool baths for the itch. If it really bothers her call up and we'll prescribe something." She makes an appointment to see the child in a month for a well-child checkup.

Ms. Tucker's next patient is a five-and-a-half-week-old child in for a new-baby examination. She and Doctor Dickey introduce themselves, and then the doctor leaves, saying he will come back later. The examination begins at 2:22 p.m. and lasts for an hour and 18 minutes. Ms. Tucker's running commentary on baby care is encyclopedic. Discovering a herniated umbilicus, she explains that it probably will get smaller in the next month and will ultimately close. Inspecting the scrotum, she discovers what appears to be a hydrocele. "You can put back his top but don't fasten the bottoms," she instructs the mother. "I want the doctor to look at this."

Doctor Dickey washes his hands, while Ms. Tucker shows him the weight graph. "It's a little below normal," he tells the mother, "but we'll watch it to see if this trend continues. Yes, this is a hydrocele on the right side." He explains what a hydrocele is. "We frequently see it in children. If it doesn't go away by itself, it has to be surgically corrected. It's not a serious problem. It's harder on the parents than on the baby."

"Pam took her time on this exam because we aren't rushed today," Doctor Dickey says. "Forty minutes is about the average. Most of our patients are poor people, and they appreciate our taking the time we do. They're very willing to take advice, despite what some doctors believe, as long as we take the time to talk to them. Next time Karyl or I will see the baby. That's a double-check, and also, that way we get to know the patient in case his mother calls us at 3:00 a.m." To the mother Doctor Dickey says: "That'll be $10 for today's visit and $7 after this."

The Dickey-Tucker practice is strong on behavioral problems. "I have studied transactional analysis and I use it in my practice," Doctor Dickey says. "I'm always looking for a situation where I can help a parent understand himself and the child. Take a hyperactive child with a short attention span. The teacher is busy and gets irritated. She criticizes the child and the child starts lying. The mother starts criticiz-

ing the child. Then the child comes to you with a problem: He's being thrown out of school.

"I'll call the teacher and listen to her talk and see if she sounds authoritarian—whether she says the child *should* be doing this or the child *should* be doing that. Then I'll talk to the child and find out just what things seem to irritate the teacher. I tell the child that everyone makes mistakes. That includes the teacher, your mother, and you. There's nothing unusual about that. You feel bad for a while after making a mistake and then you feel good. But if you do a lot of bad things then you feel bad all the time. Eight- to 11-year-olds are real good for this. I get them to make a written contract with their parents. This usually helps. I'm a parent figure, with clout, and I've given the kid permission to make mistakes. He realizes he's really not a rotten child."

Ms. Tucker, learning this same technique from Doctor Dickey, is also helping out with school problems, but is more impatient with the education bureaucracy. She tells about how she has been trying to get a seven-year-old girl into a special school for children with problems:

"The child was so afraid of failing that she kept indicating she heard a tone on a hearing test, even when there was no tone to hear," Ms. Tucker says. "When I told her gently that this wasn't necessary, she broke into tears. She had been kept back a year in the first grade and was in danger of being held back again. When I talked to the teacher, I found her unsympathetic. This child belongs in a small class, with a non-threatening teacher."

The Dickey-Tucker practice is mutually reinforcing. Doctor Dickey sees young boys who don't want to be examined by a woman; she sees young girls who would be embarrassed to be examined by Doctor Dickey. Ms. Tucker also notes that she got Doctor Dickey interested in going with her to a meeting of the La Leche League, an organization she says "where doctors hardly ever go. But, of course, he's just as interested in breast-feeding as I am."

Ms. Tucker calls Doctor Dickey in to pierce the ears of a three-month-old girl she has just examined. Doctor Dickey first uses a special pen to mark the site of the earring on the lobe. "Too low," Ms. Tucker objects. "No," answers Doctor Dickey. "It's just that the lobes are a little small." They compromise. "Put it in on the high side of that mark," Ms. Tucker suggests. Doctor Dickey clamps shut the device, which looks very much like a punch used to make round holes in paper, and the tiny earring is installed.

Two brothers, five and seven years old, come in to be checked for anemia. The older boy bravely lets Ms. Tucker stab his finger and fill three capillary tubes. But the younger boy howls and screams. Ms.

Tucker tells the mother that she will have to take the blood from his arm with a syringe, since he is moving around so much. But even that proves impossible. "You brought his father along the last time, didn't you?" the nurse practitioner says. Perhaps a man is needed. "Bob," she calls. "Will you help out?" Doctor Dickey draws the blood almost painlessly as Ms. Tucker aids in soothing the boy.

Ms. Tucker lets the small boys watch her put the blood samples into a centrifuge and whirl them around. The test indicates both boys are deficient in iron. "There's not much to our lab right now," she says. "We only do our own hematocrit, throat cultures, urine cultures, and urinalysis. The rest we send out to a private lab. When we get our remodeling done we'll have a better lab."

Doctor Dickey is involved in the nurse practitioner program at Children's Hospital. He teaches physical diagnosis and lectures on chest diseases. His partner also teaches there. "I'm toying with the idea of training my own nurse practitioner right in the office," says Doctor Dickey. "But it would be selfish to gear them only to my own practice. It is better and fairer to train them in a hospital or clinic environment, where they face realities and have broader experience."

Ms. Tucker seldom gets into a hospital any more. "I talked to one hospital about giving me hospital privileges," she says, "but the person I talked to said I could only visit the mother. I couldn't be allowed to examine the baby. Well, I didn't see much point in that. If I can't see the baby, how can I answer the mother's questions?"

Sitting down for a cup of the black instant coffee he likes to sip between patients, Doctor Dickey talks about how satisfying he finds his practice.

"The children we see are much sicker than suburban children. Their medical care has been intermittent—in emergency rooms and well-baby clinics. They have chronic disease, such as asthma, as well as seizures and mental retardation. They have thyroid disease, worms, iron deficiency, and sickle cell anemia. We pick up problems in speech, hearing, and vision.

"It's a real joy to have a family of three kids come in with the kind of problems that we can do something about. Like iron deficiency, or nearsightedness. Or an allergic rhinitis with a headache. Or dental caries. I might even refer a child to a plastic surgeon for work on malformed ears. When you take care of problems like those, you've taken care of 98 percent of the problems of the family. That makes me feel good."

"Me, too," Ms. Tucker says. "This is the most satisfying job I've ever had."

J.S.

SOMETHING NEW IN WILLIAMSPORT

Williamsport (pop. 45,000) is situated in the hills of Lycoming County in north-central Pennsylvania. It is—with its economic core of a handful of industrial plants—in many ways a typical American city of its size, and it has experienced a typical American problem. It was losing its doctors.

This was not the result of a mass exodus. It was the simple arithmetic of attrition. Doctors died of old age, and there were few new doctors turning up to take their place. In 1970, the average age of the 110 physicians licensed to practice in Lycoming County was 52. Only 20 percent of them were family practitioners.

"It is true that we have a physician deficit in the United States," Herman W. Rannels, M.D., vice president and medical director of the Williamsport Hospital, says. "But that is not the main problem. The problem is maldistribution. That was the problem I found when I came here a few years ago. How do you induce the young men from academic centers to come out into the rural areas and set up family practice? We haven't yet found the answer to that. But I think we're solving something here in Williamsport."

The health care situation in Williamsport received its severest blow in the middle sixties. The 400-bed Williamsport Hospital lost accreditation of its intern and residency programs. The loss of accreditation eliminated the house staff, the traditional providers of around-the-clock medical care in many hospitals.

The community solved this problem—temporarily—by increasing the responsibilities of staff nurses and also by recruiting six local family physicians to work full time in the emergency room. But this new arrangement did not solve the problem of obtaining future doctors. Traditionally, physicians establish practices within a short distance of where they have had their residency training. Most Williamsport physicians originally had been drawn to the area in this way. But this pipeline of doctor recruitment had been plugged.

The cancellation of the residency program, however, did have several positive effects. First, when the nurses assumed greater responsibility in the hospitals, it proved to many people that nurses could work in expanded roles. But, perhaps more important, the disappearance of the residents created a crisis situation in which the leaders of the community

realized that action would need to be taken to provide continued health care.

That was the situation when Doctor Rannels came to town. Doctor Rannels was formerly the director of obstetrics and gynecology at the Hunterdon Medical Center in New Jersey. He moved in the sixties to Irvine, California to supervise the birth of the Orange County Medical Center, affiliated with a local branch of the University of California. He came to Williamsport in February 1972. He was attracted there by its good-sized community hospital—and by its challenging plight. He thought Williamsport was ideal for the establishment of his special interest—a family practice training center.

Doctor Rannels hired David Ross as assistant director. Ross' job was to try to obtain a government grant to provide funding for the educational facilities necessary for an accredited residency program. Doctor Rannels also looked around the community for a physician to appoint as head of a new family practice unit to be connected with the hospital. Such a physician would have ultimate responsibility for training family practice residents. He chose Arthur Taylor, M.D.

Doctor Taylor had come from Erie, Pennsylvania, where he had grown up wanting first to be a fireman, then a forest ranger. ("I'm still putting out fires and planting things," he says.) An uncle was a Mayo Clinic physician and an older brother also became a physician, and that tipped the balance. He became one, too. Doctor Taylor came to Williamsport in 1953. He trained at the hospital, and settled into private practice.

Doctor Rannels' invitation gave him many sleepless nights. He recalls: "I had mixed emotions. I could retain my family practice, but I would have to spend extra time recruiting resident physicians and getting the program organized. Did I want to get involved in teaching? Well, I had been involved in teaching nurses and residents previously and this did appeal to me. Finally, I agreed."

In order to manage the increased demands on his time, Doctor Taylor changed his concept of delivering health care. He was aware that the Pennsylvania Nurse Practice Act permitted nurses with more than conventional training to perform certain tasks previously confined to physicians. So he recruited a nurse practitioner, partly to free himself, but also to serve as a role model for the young physicians who soon would be coming through the program. "If we were going to be training family practice residents, we wanted to make sure they were exposed to people who could function with them as team members."

He adds: "For this role model, we needed somebody who was 'well thought of' in the community, and who had good rapport with the hospital staff. When you are starting something new, it's also important to have somebody that's highly qualified. The concept was new, but the

person I put into the slot was familiar. I recruited Wanda Hendershot."

Born and raised in Williamsport, Wanda Hendershot entered Williamsport Hospital's school of nursing after graduation from high school. "I never had any strong inclinations toward nursing," she admits, "but I wanted some further education, and nursing school was most economically feasible. I found my inclination there. I have never had any unhappy thoughts about that decision."

Following nursing school, she enrolled at Lock Haven State College. "I realized I wanted to do something more than staff nursing," she says, "and the only way to advance myself was to get a degree." She taught briefly at the school of nursing, then married and moved with her husband to Moscow, Idaho, where he entered graduate school at the state university there.

She obtained a job there as a staff nurse at a 40-bed community hospital. "We did not have such things as orderlies, so the nurses had to be jacks-of-all-trades. The emergency room was not staffed routinely, so when the buzzer rang downstairs, someone from the nursing floor had to come down and do whatever needed to be done until a doctor arrived." After nine months, a position opened in the operating room of the hospital, and she took it. She was one of two nurses working in close collaboration with two surgeons. She found the experience extremely rewarding, because of the variety of operations done in small hospitals. "It wasn't doing the same things every day," she says. "I like change."

She and her husband returned to Williamsport. She taught at the nursing school again for six months, had a baby, taught practical nursing at the community college, had a second child, and then became a clinical instructor. She had been working in that capacity for a year and a half when Doctor Taylor asked her if she would enjoy becoming a nurse practitioner. It sounded like another change. So she said yes.

Ms. Hendershot enrolled in a three-month nurse practitioner program at Case Western Reserve University, in Cleveland. "The program began with our looking at health care from the standpoint of well individuals," she says. "We branched out to deal with specific chronic problems, such as diabetes and hypertension, then acute problems and respiratory tract infections, and gastrointestinal upsets. We focused on history taking, communication skills, and physical examination skills.

"Some of what we learned duplicated what most of us had previously learned by virtue of our nursing background; however, the physical examination skills represented a whole new ballgame for all of us. This always before has been foreign to nursing.

"But being ables to use the instruments is not what turns me on. That's no big thing. It's just one of the methods you use to collect the

necessary information. I get most enjoyment out of the fact that I can relate to people. They can feel that, as a nurse, I have more time for discussing some of the simple problems that they otherwise could not bother a physician about—problems that are still important to that individual.

"From a teaching standpoint, I derive a lot of satisfaction from knowing I've helped a person understand his health status, whether it be normal good health or some chronic disease that he must live with—help them cope on a day-to-day basis. I can help them understand whatever it is the doctor has prescribed for them, so they will be more likely to comply with whatever medical regimen is necessary.

"I enjoy merely helping people get to the right place for the right thing. And a lot of what a nurse practitioner does is to coordinate activities. When you are doing your initial assessment, you may find that someone has a problem that could better be handled by some community agency. You can be the link that will help them get referred there—sent to the right person to solve their problem.

"It's a challenge. It's mentally stimulating talking with someone, putting together the information they give you verbally, collecting physical data, and seeing the solution. It's kind of like sleuthing, or solving a problem. When you come up with a certain answer and the physician implements a regimen to handle the particular problem, you then can watch the individual progress on a day-to-day basis, and offer him support.

"Dealing with the total family can be very satisfying too. At this point, I'm getting to know the grandmothers and the sons-in-law. Knowing the problems of all family members helps you see how a new problem can affect the total family situation. It gives you a better overall picture and a means to relate to the patient. The assessment skills, using instruments, is only a small part of it. It was something heavily focused on during our original program at Case, because it was a totally new component for nurses."

When Ms. Hendershot began practicing in September of 1973, few people in the Williamsport community had ever heard the term "nurse practitioner," let alone knew what such a person did. Doctor Taylor began a public relations campaign to make certain she was properly introduced to the community.

He approached the local newspaper, which assigned a reporter to write a feature article about the new approach to health care in town. Doctor Taylor and Ms. Hendershot also appeared on a local radio interview program to discuss what her role would be. Since health care is a popular subject, they found they had little trouble convincing the media to help bring their story to the people. They also mounted a public relations program within the office. As patients appeared for appoint-

ments, they received pamphlets describing the nurse practitioner's role. Doctor Taylor found that since his patients trusted his judgment, they accepted a nurse practitioner as a provider of health care.

"People didn't know what a nurse practitioner was," he says. "About that time we had young resident doctors in our office and in the hospital. At first, patients thought Wanda was one of the residents, but we kept pointing out, 'She has on her jacket, *family nurse practitioner.* She is something different.'"

Slowly the word began to spread. Ms. Hendershot discovered that when she walked into the examination room and introduced herself, the patient frequently would respond in a positive note: "Oh, yes, I've heard about you." She found that people, especially members of the same family, talk. Word about her soon spread.

Wanda Hendershot says: "I'm acquainted now with a large percentage of the patients who come to our office. Still, some patients appear whom I have not met yet. I always introduce myself and say what I do. I don't say 'I'm a nurse practitioner,' because they usually just stare. You can tell from the blank expressions on their faces, they're thinking: 'What's that?' So I put it simply: 'I'm a nurse, and I've gone away and had additional schooling. And I've learned to do examinations and some of the things that always have been done by doctors in the past. This is now being done by many nurses with the kind of additional training I've had. I now work *with* Dr. Taylor.'"

Doctor Taylor and Ms. Hendershot often make rounds together at Williamsport Hospital. It is difficult to determine which one is the doctor and which one is the nurse—at least from their actions. It is only custom and preconditioning that identifies the male as the doctor, the female as the nurse. They walk the hospital corridor side by side, not one trailing the other. They enter a room to see a patient and both greet him cordially and are so greeted in return. Either one or both may examine him with a stethoscope. Either or both may write notes in his chart. Either or both may dictate further comments into a recorder that either one or both may carry.

They move briskly from floor to floor, sensibly preferring stairs to the elevator. They slow only at the rooms where they have patients. There they pause to chat. They tell their patients how treatment is proceeding. They stop again at the nursing station to recommend changes in the medical regimen. Occasionally, by watching closely, you notice that Doctor Taylor handles that last detail. It is one of the differences in their roles. It is he who prescribes the medicine.

They visit the intensive care unit, and it is also Doctor Taylor who informs the floor nurse that his patient can be moved now to a regular room. Later, during their rounds, Wanda Hendershot enters a room

with him and before examining the patient moves her into an upright position. "I was thinking about medication," Doctor Taylor says, "but Wanda's first instinct was to make the patient comfortable."

With their rounds completed, Doctor Taylor returns to his office across the parking lot from the hospital. Wanda Hendershot remains behind to give a patient a complete physical examination—looking at his throat, listening to his heart, and even testing his reflexes by tapping with a little rubber mallet. She also questions him concerning the exact events that led up to his current illness, a heart attack.

Ms. Hendershot spends 45 minutes doing the examination. It is the sort of thorough physical examination that all physicians are trained to make, but that few have the time, or take the time, to do. Still later in the day, back in the office, she will discuss her work with Doctor Taylor. He may then double-check certain findings when they make hospital rounds the following day. Sometimes they visit the hospital together in the morning and return to the office for patient visits in the afternoon. Other days, they see office patients first and make afternoon hospital rounds. Occasionally, one or the other will make hospital rounds alone. "The reason we mix hospital work with office work," Doctor Taylor says, "is that it results in more continuity of care. The patients more willingly accept care as outpatients after daily contact in the hospital. They remember, particularly, that Wanda and I came in to see them together. The patient accepts the nurse practitioner and there is no difficulty."

In the office, patients are seen by either Doctor Taylor or Ms. Hendershot, often at random. "We consider ourselves a team," she says, "and any one of the team members may see the patient on any given visit. We don't feel we are fragmenting care, because we communicate regularly with one another."

Doctor Taylor agrees. "She knows my routine," he says. "After Wanda examines a patient, if she feels he needs a cardiogram, a chest x-ray, or blood tests for me to make a diagnosis, she will order them. When it comes to therapy, we put our heads together."

He feels that she is particularly adept at treating chronic patients—those with hypertension, diabetes, or other stable diseases—who need monitoring and counseling, but not radical changes in their medical regimen. Even so, Ms. Hendershot does see sick patients in addition to well ones. She averages about ten patient visits per half-day in the office.

Doctor Taylor discovered one bonus of his collaboration with a nurse practitioner was being able to have her make visits away from the office. "I haven't been to a nursing home in nearly a year. Wanda visits my nursing home patients, then comes back and reports to me. We are

able to make occasional house calls too. Everybody says they want house calls, but most times you can't do much. But there are certain patients who have cancer, or strokes, or broken bones, whom you may want to see at home."

Doctor Taylor's patients, with one or two exceptions, willingly accepted a nurse practitioner as the provider of their care. A few hospital physicians grumbled at first, but, as Doctor Rannels says: "Nobody has rebelled." Perhaps more notable was Ms. Hendershot's acceptance by others within the nursing community—something nurse practitioners in other areas have not always achieved. One nurse who had worked for years in Doctor Taylor's office, and who, presumably, might have resented the interjection of a higher ranking nurse into the office hierarchy, openly welcomed Ms. Hendershot. Now, she even insists that Ms. Hendershot, not Doctor Taylor, do her physical examinations.

Wanda Hendershot has had no problems with staff nurses, while making hospital rounds each day. She says: "I was part of the nursing staff before I went away for nurse practitioner training. I came back the same person. I was doing a different job, but I was still a nurse. A number of the nurses have told me, 'You've got to succeed, because you're opening doors for the rest of us.' I can help prove the point that nurses are capable, in many instances, of doing much more than they're currently doing."

Following the establishment of Wanda Hendershot as nurse practitioner at Williamsport Hospital, other physician extenders have begun working in the community. One male nurse received on-the-job training as a nurse practitioner in the family practice department, then transferred to work with two doctors in coronary care. Doctor Taylor recently hired a health associate to alternate with Wanda Hendershot between hospital and office. She, too, will serve as a role model, demonstrating the capabilities of the health associate.

After Ms. Hendershot returned from Case Western Reserve University, several other Williamsport-area nurses followed her route into nurse practitioner training. "Wanda made such an excellent impression," Doctor Rannels says, "that we were able to get a permanent place for our nurses in the Case Western training program."

Two nurse practitioners who trained at Case now work with four doctors in a satellite medical clinic, established by Williamsport Hospital, in nearby Blossburg, after the state hospital in that community closed. Nurse practitioners also staff clinics in the neighboring towns of Mansfield and Elkland. In the village of Picture Rocks, a Williamsport physician works part-time with a nurse practitoner and a health associate to provide needed health care services.

The nurse practitioner concept has become increasingly acceptable to

the young new doctors rotating through Williamsport Hospital. One of these is Leo M. Hartz, M.D., a junior resident, who grew up in Shenandoah, in eastern Pennsylvania. He attended medical school at George Washington University in Washington, D.C., before arriving at Williamsport Hospital to complete his training. He says that he and most of the other residents were sold on the nurse practitioner concept before arriving in town.

"We came out of medical school," Doctor Hartz says, "with the idea that the doctor didn't necessarily have to spend time with all of the patients in his practice in order to give quality medical care. A physician's services can be extended by others, whether they are paraprofessionals, physicians' assistants, nurse practitioners, or whatever title you want to give them. As long as they are well trained, they can be of great help. Most of us probably will go into solo practice, or join small groups, and there's a consensus among the residents that we would have a nurse practitioner—either formally trained or someone we trained ourselves—working with our patients."

Doctor Hartz adds: "The nurses seem to relate better to the patients. They often get more information than we could get because the atmosphere between them and the patient is less formal than that between physician and patient. The nurses get along with them better. Some of the things patients think too trivial, or too embarrassing, to mention to a physician, they are willing to confide to a nurse.

"I feel particularly comfortable with Wanda Hendershot. She does a lot of the inpatient histories and physicals when we get bogged down. You could pick any of them out; they are all excellent. She doesn't have the authority to write orders on the charts unless they are countersigned or given verbally by one of the doctors, but, after working with her a while, you almost would want to give her that responsibility. I know from experience she's not going to order anything that is going to hurt the patient."

Wanda Hendershot believes three special characteristics, or attributes, to be important to the role of nurse practitioner—a diverse background, good teaching skills, and a knowledge of your own limitations.

She feels her own general background, particularly the three years spent in the small Idaho hospital, contributed to her ability to interpret the wide variety of illnesses seen in a family practice setting. Her previous experience in teaching situations in the school of nursing, the community college, and the hospital allows her to communicate easily with patients and to tell them how to further their recovery. On the subject of knowing her own limitations, she says: "You jolly well better know them if you plan to treat patients. If you order medicine and it turns out to be inappropriate, you are putting the physician in jeopardy, be-

cause you are operating under his auspices."

By the time Doctor Taylor had established his family practice in its new setting and was integrating a nurse practitioner into the routine, David Ross had succeeded in obtaining a three-year grant of $183,000 per year to establish a residency program. In the summer of 1974, five first-year residents and one second-year resident joined the house staff of Williamsport Hospital. The next summer then, they brought in seven more residents. When the program is complete, there will be a total of 21 resident physicians, both learning and serving.

Doctor Taylor remembers that first class with satisfaction. "We had a physician available at bedside at all times," he says. "That was more than a convenience. Young residents demand to be taught, and teaching is the great continuing education. For us and the whole community."

H.H.

THE *WHOLE* CHILD

Ball High School, the only public high school in the old Gulf Coast city of Galveston, Texas (pop. 67,175), is an unusual school for its time, place, and kind. It has, in its two units—Ball North (for freshmen and sophomores) and Ball South (for juniors and seniors)—a total enrollment of 3,306, almost half of whom (43 percent) are black, and most (children of shrimp fishermen, stevedores, refinery workers) are relatively poor. But Ball—both North and South—enjoys an innovative school health program that ranks with the best in the country.

The nucleus of this program is a steadily growing corps of school nurse practitioners trained in the pediatric nurse practitioner program at the University of Texas Nursing School in Galveston. "We're concerned with more than merely expanding our school health services," Mrs. Mildred Williamson, R.N., coordinator of health services for the Galveston school system, says. "We feel that the key to better student health is the school nurse. One innovation is to change the role of the school nurse, so that she not only looks after the students in school but also works closely with their parents in finding resources for health care. Seven of our ten nurses are recently-trained nurse practitioners. They give our children better care than ever before. They come back to us from a four-month program at the nursing school with new strengths and new skills. They are expanding their nursing roles and consequently doing a broader and better job."

School nurses in the Galveston program have gained a wide and increasing respect. This is clearly evident at Ball South, where Jane Conrad is the school nurse practitioner. Mrs. Conrad came to Galveston during World War II to go to nursing school. She had originally planned to become a commercial artist, but she turned to nursing as the result of a wartime advertising campaign. Mrs. Conrad remained in Galveston, marrying and raising three sons. She also worked on and off as a nurse at the U.S. Public Health Service Hospital, where merchant seamen are treated.

Mrs. Conrad's marriage ended in divorce in 1970, and she took a job as a school nurse. At first, she says she felt inadequate in the job. "A child would come into the clinic and expect me to help him. He'd have a rash, an abdominal pain, or a sore throat, and I had to make a

decision whether to send the child to a doctor. Doctors are expensive. So when I heard about the pediatric nurse practitioner program at the nursing school, I wanted to go, but I didn't think I had a chance."

There was a developing demonstration school health program, first supported by grants from the U.S. Office of Education, Texas Regional Medical Programs, and later by The Robert Wood Johnson Foundation. This demonstration program was part of a broad-spectrum effort to improve school health services. Every semester, a school nurse was given a leave of absence (with partial salary and tuition paid) to take the nurse practitioner course at the university.

"But I was lucky," says Mrs. Conrad, "nobody else could get away that semester. Then I worried that I wasn't so lucky; for the first week, I thought I'd never make it. They'd bring in stacks of papers for us to study. I was the oldest one in the class, and it was hard. But I gradually dug in. Essentially, the program gave special emphasis to adolescent medicine, psychiatry, and OB-Gyn. I learned how to assess patients, going several times every week to an adolescent medicine clinic in Houston, where I saw the patients."

Mrs. Conrad got back to Ball South in time for the last two weeks of the school year. She immediately found that life was different. For one thing, she received a raise. "I was a lot more confident when I came back," she says. "And that made my job more satisfying."

The Galveston nurse practitioners are supervised by the nursing coordinator. Physician backup is provided. They spend several hours a week working with the nurses at the school and are constantly available by telephone. These backup physicians include two women pediatricians in private practice, a professor of pediatrics, and a male family practitioner. Mrs. Conrad's backup is Philip Nader, M.D., a tall, thin man in his early forties. Doctor Nader is the medical director for the Galveston school system and an associate professor of pediatrics and psychiatry at the local medical school.

Doctor Nader is the son of a World War II Air Force man. He grew up at airfields around the country, and he studied on both coasts. At the University of California in San Francisco, where he took his pediatric residency, he became strongly interested "in learning problems and behavior problems—the things that bother parents and children." Even so, he couldn't find what he wanted in child psychiatry. "At that time," Doctor Nader says, "it was traditionally oriented, having a psychoanalytic approach and dealing, for the most part, with well-to-do patients. I decided that pediatrics had more to do with patients' strengths—how to cope and how to function. Psychiatry seemed to deal more with disabilities and illnesses."

Doctor Nader says he learned something while he was taking his

military service with the U.S. Public Health Service. "It was something that I hadn't learned in medical school: There's a big community out there. I went around the country helping communities with measles epidemics. I saw poverty with my own eyes and I also saw bureaucratic blocks to the delivery of health care. I gained the confidence to work with the people in a community."

Doctor Nader then took a year-long fellowship in behavioral pediatrics at the University of Rochester School of Medicine, where he had gone to medical school. For the next six years, he held a faculty post there and also worked a day a week as a school physician. During that time, he pioneered a unique school health program in Rochester and its suburbs—one that attracted wide attention. As a result of this attention, Doctor Nader was invited to Galveston as a consultant for its program to expand student health services. Jointly involved in this program were the Galveston school system and the medical school at the university. In 1973, Doctor Nader accepted an offer to become the school system's medical director.

At the Ball South clinic, a three-room suite on the ground floor of the building, where air conditioners labor unceasingly to wring the moisture out of the soggy Gulf air, Doctor Nader's influence is felt more than he is seen. The pleasant-looking woman in her 30s who receives the students here as they come in with their complaints is Palmira Morales, the mother of five sons. She had left school at 16 to get married. Now, with a high school equivalency certificate, she is working as a health aide.

The form Mrs. Morales uses to interview each student was developed by Doctor Nader and Mrs. Conrad. It is a checkoff questionnaire, requiring some 20 "yes" or "no" answers. There are two basic forms—one for abdominal complaints, and another for upper respiratory complaints.

Mrs. Morales and the other school health aides were hired to relieve the school nurses of clerical and other duties that kept them from working at their full potential. Before this program was put together, "rap sessions" were held between four principals and four nurses. The nurses had complained, among other things, that they couldn't do their work when they were expected to answer principals' telephones, while the school secretaries were taking a coffee break.

When the checklist is checked and a student's temperature taken, Mrs. Morales is ready to turn the patient over to Mrs. Conrad, whose tiny cement-block examining room across the hall is traversed, vertically and horizontally, by an assortment of water pipes. The furnishings are equally spartan: An examining table, an old gooseneck lamp, a file cabinet, and a washstand. A half-dozen color snapshots of seniors, donated by them, occupy a place of honor on Mrs. Conrad's desk. Next

door is another small room, with a couple of cots where ailing students may rest.

The patient this morning is a weary-looking 17-year-old senior. He has an "upset stomach," the most common school complaint, and wants to go home. Mrs. Conrad is a skilled interviewer of teenagers and quickly learns that the youth looks so tired because he *is* tired; he has been working nights until 12:30 a.m. at a new job in a grain elevator, a very dusty place. He is probably allergic to the dust, for his nasal turbinates are swollen and his throat is a little red.

"I keep talking all the time I'm examining a kid," Mrs. Conrad explains. "It's a way to teach them about their bodies. If I'm cleaning out a wound I talk about infection. When I put my stethoscope to their chest I say, 'Well, your lungs are clear and that's good.' Teenagers are very anxious about minor complaints—that's very natural with adolescents—and it's good to be reassuring."

To the boy, Mrs. Conrad says: "Step up here and look into the mirror while I shine this light into your nose. See how swollen it is? Now open your mouth and look at your throat! It may be that all that dust at work bothers you and if you continue to work there you probably should get a face mask."

Because of restrictions in the Texas Nurse Practice Act, Mrs. Conrad is cautious not to diagnose. "I'm not diagnosing," she says, "I am assessing." She explains that she always notifies a student's parents about her findings and rarely deals directly with a doctor, unless the patient's care is provided by the University of Texas Medical Branch and unless she has the parents' permission.

After talking to the boy's mother on the telephone and telling her the findings, Mrs. Conrad fills out a mimeographed parent referral form that he can also show to his physician at the clinic. "Hubbard, see if you can get the doctor to write on this what he found and bring it back to me," she tells him. If the boy didn't have a doctor, and if the family could afford one, Mrs. Conrad might have come up with a list of local physicians who still had room in their practice for new patients. Or, if the family couldn't afford to pay, she would have suggested a variety of clinics.

On the referral sheet, Mrs. Conrad notes, in standard case-history terminology, that the boy has awakened for several days with a headache (frontal), that there has been nasal stuffiness for two months, and that, for the last six days, he has been working at a dusty job. Making an "O" with a dot in the center to indicate her objective findings, she writes: "Some frontal and maxillary sinus tenderness. Nasal mucosa red and turbinates markedly swollen bl (bilaterally). Afebrile."

In the past school year, Mrs. Conrad has made more than 250 such

referrals, and she has performed 15 complete physical examinations, for which parental permission is required. These examinations consist of an in-depth history and a thorough physical and neurological examination. Only a physician or a nurse practitioner is permitted to make such examinations. Twelve of Mrs. Conrad's examinations were those required for special education students. The other three were performed on students whom Mrs. Conrad was especially concerned about. After Mrs. Conrad does these examinations, Doctor Nader signs the examination forms.

"At first, the special education people thought of Jane as just another school nurse," Doctor Nader says. "They thought she could give a vision or hearing test, but not much else, and they didn't find her very valuable at their staffings, when they re-evaluated children." In the case of the 12 young people who had to be re-evaluated, Doctor Nader had Mrs. Conrad do more than just a physical. "I had her get out the kids' folders and review all the material with me, and then she went to the meeting with a presentation. She was terrific."

The nurse practitioner training has given Mrs. Conrad the confidence to believe in her newfound ability. One Thursday morning, when Doctor Nader worked with Mrs. Conrad at her school clinic, a 17-year-old youth walked in.

"He was terribly anxious," says Doctor Nader. "He was pacing up and back and spewing out 'word salad.' I said, 'Jane, go take care of him. I have to go to a meeting.' Later she called me and accurately described his problem as a psychotic break. 'What do you think should be done?,' I asked. 'Take him to the psychiatric emergency room,' Jane said. 'You're right,' I answered.

"Jane called the psychiatric emergency room and talked to the resident. Then she drove the boy there. Before her special training, Jane would have worried that no doctor would listen to her. Many health providers don't have a very good opinion of a school nurse. She is very isolated. Remember, she's the only health professional in a school. So I think the nurse practitioner training builds her nurse's confidence in her own skills and helps her with medical jargon so she can communicate better."

Doctor Nader is extremely complimentary about Mrs. Conrad's abilities. "I talk to her like one of my pediatric residents," he says. "In some instances she's more advanced. She has skills in interviewing adolescents that the residents don't have. She has an understanding of why kids have certain symptoms, of what they mean, and of their causes. She knows the dynamics. She knows how to get into a kid's head. She knows that you can't be judgmental with kids, that you don't try to give them advice. You let them figure things out."

Mrs. Conrad blushes at the compliment, when it is reported to her.

"I guess I *am* more confident," she says. "And I want to get more education—maybe a degree in psychology. I've gone back to Galveston Community College summers and evenings and taken 43 hours already."

The patient log that Mrs. Conrad keeps—an ordinary spiral-bound notebook—testifies to her concern and medical acumen. Among the entries are:

. . . A 16-year-old girl with enlarged tonsils, with exudate on one of them, and enlarged lymph nodes, was referred to her mother and taken to a private physician who found the student had a strep throat and treated her with penicillin for ten days. ("This year I learned," says Mrs. Conrad, "that fever is not a criterion for a child being ill. The majority of the throats I referred for multiple positive findings were mostly afebrile and they were diagnosed as strep throats.")

. . . An 18-year-old senior, who had been married for a few months, complained of pain during coitus. Mrs. Conrad made an appointment for her at a family planning clinic and drove her there after school. The young woman improved quickly and soon became pregnant.

. . . An 18-year-old boy approached her in the school library, where she was doing vision testing, and said, "I've got to see you right away." Amidst the book stacks he confessed that he was treating himself for gonorrhea with some leftover penicillin tablets. Mrs. Conrad told him of the danger that the tablets might only mask the symptoms and that the gonorrhea could linger. She gave him the names of three free clinics, and he was treated successfully. She continued to counsel him for a drinking problem.

. . . A 17-year-old boy complained of chest pains, though the heart and lungs seemed normal. But Mrs. Conrad astutely noticed that his chest wall was asymmetrical, "suggestive of scoliosis but not quite." Suspicious, she referred him to a pediatric orthopedic surgeon, who found two muscles missing in the chest wall—the lower portion of the pectoralis major on the left side and the latissimus dorsi. Since the missing muscles accounted for his appearance, but not for the chest plains, he was seen by another physician who ruled out trouble with heart or lungs. All this was carefully explained to the boy by Mrs. Conrad, who took further steps to see that the boy got the proper help.

. . . A boy who "held his head funny" when looking at a book was sent by his teacher for a vision screening. Mrs. Conrad went farther. Taking her usually thorough history, she learned that the boy had just lost an older brother, that another brother was receiving dialysis, and that this boy probably had the same disease. Even though the family was well-known at the medical school, this important information had not been communicated to the school. Mrs. Conrad gave the boy the psychological support he needed so badly. Continuing to work with

him, and knowing that he was going deaf as a result of the illness, she got him certified for state aid, so he could receive a hearing aid.

. . . A 13-year-old boy complained of dizziness and sharp pain after suffering a blow on the ear in a physical education class. Mrs. Conrad could see bright red blood on the tympanic membrane. The boy's mother took him to a doctor and later to a hospital emergency room which referred him to a clinic. They left without being treated. Calling back in a few days, as is her custom, Mrs. Conrad learned from the mother that the boy's ear was still draining blood. Mrs. Conrad referred them to a community clinic, where the boy was treated with antibiotics for the otitis media that had developed after his ear drum had perforated. Then she checked his ear regularly for the next few weeks to make sure that it was healing properly.

Mrs. Conrad is not at all shy about calling for help when she needs it. Ball North, just a block away, also has a nurse practitioner—a lively woman named Gloria Ellisor. Mrs. Conrad describes her as "my black sister" and the two feel free to consult one another for a second opinion on unusual findings.

One Sunday Mrs. Conrad called Doctor Nader at his home, unable to put aside her worries about a 16-year-old girl who was failing all of her subjects. The girl was having difficulty in understanding instructions, either written or oral. Mrs. Conrad had called the mother in to get a thorough medical history, and with her permission, performed a complete physical examination.

"The child had suffered multiple insults," Mrs. Conrad says. "She weighed only three pounds at birth, had meningitis, and had to have open heart surgery. In my exam, I found tunnel vision in one eye. The child thought she was going to die because of her bad heart."

Mrs. Conrad said the girl has been seen many times, but no one apparently had ever taken a look at the *whole* child. Doctor Nader then referred her to the child development clinic at the medical school. To Mrs. Conrad's surprise, the professors there wrote back that *her* evaluation had been exactly the complete evaluation that she was now requesting. She had referred the girl to an ophthalmologist and a pediatric cardiologist, and had her admitted to a work-oriented school program.

In the future, liaison between the medical school and the Galveston schools should improve because of the development of a system for sharing patient records. Basic health information obtained by school nurses and by physicians at the pediatric clinic are fed daily into a computer in Houston. This information includes growth data, blood pressure, immunization status, and results of vision and hearing screenings. Already, patient-record information has been compiled on more than 3,000 students.

Parental permission must be received before a school clinic can have access to the computer files. To protect patient privacy, the computer is programmed so it will not give information unless a secret password is given. In addition, certain confidential information is never placed in the computer, since this file is not designed to replace conventional paper medical records. Its value, rather, is to instantly print out such things as when a child is due next for a medical appointment and to ensure that the school nurses know which of their charges have serious medical problems.

Although the school nurse practitioners are quite independent—perhaps more so than nurses in a physician's office or clinic, where they work directly with a physician—it is Doctor Nader's belief that they need even more independence. Right now, he is trying to get authority for the nurse practitioners to operate under so-called standing orders, which, under certain circumstances, would allow them to dispense, say, aspirin for a headache or a medicated shampoo for head lice. "But a lot of people, including some doctors, don't believe that treating kids is the correct role for a school," says Doctor Nader.

To improve communications with local medical practitioners, Doctor Nader recently invited them to an informal sandwich lunch. The purpose was to show these physicians how the nurse practitioners could be of service to them. At the moment, Mrs. Conrad has an order from one of these physicians for a sedative to be given to a student in the event he has another attack of acute anxiety. The student had broken down in class one day and was hyperventilating. Mrs. Conrad soothed the youngster by putting her arms around him and had him breathe into a paper bag until his doctor arrived.

First aid in the schools is now limited to the simplest of procedures, as can be seen by the contents of the medical cabinet: Band-Aids, Merthiolate, distilled water, 4x4 dressings, hydrogen peroxide, alcohol, and powdered meat tenderizer. The tenderizer came in handy, for example, when a bare-armed girl comes in and complains of a bee sting. Mrs. Morales sprinkles meat tenderizer on the sting and moistens it with water. It seems to help. In case of more serious injuries, students are taken to a hospital. Mrs. Conrad recently drove a boy to the medical center emergency room after he began retching in a physical education class. It turned out that he had taken an overdose of aspirin after some trouble at home.

But Doctor Nader is not concerned about the limited first aid facilities. First aid is the traditional role of school nurses, and he wants to do away with such traditions. "It's become too expensive to have a nurse spend her days slapping on Band-Aids and answering the principal's phone," he says. "If there's first aid to be done, the aides can usually

do it."

While some physicians may be slow to warm up to the nurse practitioners, the educational community is not. Mrs. Conrad excuses herself and steps out into the hallway to confer with the 12th-grade principal, who is trained as a counselor. He is worried about a student—a boy whose teacher wants him kicked out of school. The boy, normally a model student, had exploded in a rage and swore at the teacher.

The principal wants Mrs. Conrad to evaluate the boy's stomach problems. He says that he'll take care of the "head problem." She retorts that the two problems are intertwined and that she wants to help with both. Later she exults: "Last year this never would have happened. He never would have come to me for help."

Next morning, when it is Doctor Nader's time to make his weekly Thursday visit to the clinic, he and Mrs. Conrad discuss the boy's case. "The teacher feels he has to have the kid kicked out, that he can't let him get away with this," Mrs. Conrad says. The normally mild-mannered Doctor Nader disagrees. "*Yes,* he can!" They discuss a strategy for dealing with the principal that could circumvent the teacher. "The fact that the principal has agreed not to kick the kid out right away is very positive," Doctor Nader says. "When we meet with the principal, we'll ask him what plans he has for defusing the teacher."

Flipping through Mrs. Conrad's notations of the past week in her patient log, he notices that a girl has complained of passing "unusual tissue." A spontaneous abortion? He asks if Mrs. Conrad discussed "exposure" with the girl. "She denied any," Mrs. Conrad says.

A couple of pretty girls, who had been in yesterday to show off a mysterious rash, now come back, as instructed by Mrs. Conrad, to show it to Doctor Nader. "Rashes are tough," he says. "We really ought to have a textbook on pediatric dermatology here." Then he makes his diagnosis: "Molluscum contagiosum. It's caused by a virus and don't worry about it." A third girl comes in with the same rash. Doctor Nader laughs. "What do we have here, an epidemic?"

Toward the end of the day Doctor Nader and Mrs. Conrad spend more than an hour behind closed doors with one student. His original complaint was a headache. Suspicious, Mrs. Conrad talked to him at length. She found he had extremely low self-esteem. When she asked him to draw a picture of himself, he made a circle not much larger than this O and pencilled in three dots for the nose and eyes.

The school system apparently had never detected the learning disability he had long suffered. Now, Mrs. Conrad has before her a battery of tests that help to explain why the boy is failing several subjects. She and Doctor Nader have their strategy prepared, and they talk to the student:

Mrs. Conrad: "In your learning, you sometimes have trouble remembering what you see and hear."

Boy: "You mean I can't see?"

Doctor Nader: "It's not that you're not trying. It's a handicap. It's the process of seeing and hearing that you have difficulty with. You did well learning how to read as well as you did."

Boy: "I hate school. I'm getting dumber."

Mrs. Conrad: "I've got your grades here for the last six weeks. You're improving in science and English."

Boy: "I don't like school. I get tired, lazy, and bored."

Doctor Nader: "There's a reason for your difficulties. It's not your fault."

Mrs. Conrad: "A lot of people have learning difficulties. I've had to overcome them myself."

Doctor Nader: "We think you're normal. We'd like your permission to drop a note to your dad."

Boy: "No!"

Doctor Nader: "Could you help me understand that?"

Boy: "Just no!"

Mrs. Conrad: "Hyperactive children change in adolescence. We think your father never really understood what to expect from you. That's why we want to write him a letter. He's been a little hard on you with his expectations."

Boy (changing his tone): "Okay, if *that's* what you want to do."

Doctor Nader: "We understand you're moving to another city next semester."

Mrs. Conrad: "I wish I could be there to help you."

Doctor Nader: "Jane can give you her address, and you can stick it into your billfold. You can write her if there's some way we can help with the school or with your father."

The boy leaves. Doctor Nader turns to Mrs. Conrad. "I thought you did very well," he says. "In a case like this, it's not what you say. It's how you say it. And you said it very well."

J.S.

THEY DON'T PLAY GOD

The place is Bellevue (pop. 70,000), a comfortable suburb of Seattle, Washington, and the scene is a comfortable, book-lined room overlooking a sunny patio. Donna Bates (as she will here be known) is sitting in this pleasant room, smoking a cigarette, an ordinary tobacco cigarette. Four years ago, when Donna was 16, her cigarette would have been a joint, and the room would have been a very different room. For Donna was deeply troubled then, wrangling with her parents, dropping out of school, ready to move into hard drugs. But Donna was lucky. Instead of going down, she found her way here—to the Family Treatment Center.

The Family Treatment Center is a private psychiatric joint practice. Its principals are Christian Kole, M.D. and Donald Jackson, M.D., and Mary Elmore, R.N. Doctor Kole and Doctor Jackson are psychiatrists. Ms. Elmore is a psychiatric nurse practitioner, and it is in her office that Donna now is sitting. Donna tries to explain how she feels about the Center.

"Mainly," she says, "they don't play God. They're real human beings. It's like they're actually there . . . not behind some screen door. Also, they operate on honesty. Oh, that can be painful; sometimes it really pisses you off, but you always know where you stand.

"Another thing . . . like I heard about other doctors and how they do things. That was when I was in the hospital. Those other ones were more like . . . ah . . . analyzers. They'd just let you talk and say 'Uh-huh . . . uh-huh . . . or ummm.' Mary and Doctor Kole weren't like that. They always had plenty to say when I talked to them. And they even expressed emotions!"

Such characterizations, of course, may reflect merely the personal prejudices of an emotionally-involved patient. But an even more reflective look at the three people of the Family Treatment Center confirms Donna's view of them as three not only humanistic psychotherapists, but also rather extraordinary ones at that.

Doctor Kole is 55 years old and a naturalized United States citizen. He was born in Amsterdam and raised in the Dutch East Indies, but he received much of his basic medical, and all of his specialized, training in the United States. Following completion of his residency requirements at the Menninger School of Psychiatry, Topeka, Kansas, he went on to

participate in a program for the development of psychiatric administrators at the University of Chicago, conduct special studies in community psychiatry, and attend workshops on mental health consultation, crises intervention, and family therapy. On clinical and administrative levels, he has been superintendent of Winfield State Hospital and Training Center, a facility for the severely retarded in Winfield, Kansas, chief of service at Illinois State Psychiatric Institute, Chicago, director of the Community Psychiatric Clinic in Seattle, and clinical program coordinator at another Seattle public mental health facility.

"My approach, my tendency to step on people's toes," Doctor Kole says, "got me into hot water in many of these positions. You see, looking back on it now, I realize that I was a very demanding person, possibly not as sensitive to the needs of those under me as I might have been.

"Also over the years, I have been looked on as a bit of a maverick. Not so much because of the way I practiced psychiatry, but because of my personality, my approach. People think I'm terribly direct. That's both a personality and cultural thing. Being brought up in an authoritarian, colonial society, where classes were clearly marked—and where I was a white top dog—I simply accepted authoritarianism as a fact of life. And it took me some time to realize that, in America, one is nice to everyone."

By contrast, Doctor Donald Jackson is more relaxed, more casual in his dress and appearance. At 49, he wears his gray-streaked hair much longer than does Doctor Kole, and his work-a-day clothes are usually a sport jacket and turtleneck sweater, rather than a business suit and shirt-and-tie. In fact, if one did not know that an M.D. went with his name, one might take him for a slightly mod minister.

Prior to completing his psychiatric residency at the University of Washington, Doctor Jackson had, for almost ten years, been a small-town physician, with his own general practice in his native Michigan. His interest in the human, counseling aspects of medicine led him to psychiatry; his love of the Pacific Northwest brought him back to the area he had become fond of while completing his first years of higher education at Seattle Pacific College. After receiving his certification as a psychiatrist, he went into private practice for about a year. Then, growing ever more interested in community mental health, he became the medical director of the facility in which Doctor Kole, he, and Ms. Elmore first began operating as a team. He had no trouble accepting Ms. Elmore as an equal.

"I've always thought that I had a little more regard for the abilities and judgment input of nurses than most other physicians," he says. "I've always felt that their value went beyond the job of simply carrying out a physician's orders."

If Doctor Jackson's attitude toward nurses' capabilities is not that of the average physician, the training and career of Mary Elmore with whom he and Doctor Kole share this practice is no less atypical. The daughter of a nurse, she had gravitated to her mother's career because she liked people and working with them. Uncertain of where that career would take her, she entered the University of Michigan, where she received a bachelor of science in nursing.

"I had become interested in psychiatry and thought I might like to do something in that field," she says. "In any case, I knew something about hospital nursing. My mother worked in a hospital back home in Michigan, where, as it happens, Doctor Jackson was a staff member. I knew that wasn't what I wanted to do with my life. It seemed to me then that a staff nurse meant working more with paper than people and people were my main interest."

Her experience in the years following included pediatric nursing in two hospitals: Psychiatric nursing with autistic children in San Francsico's Langley Porter Clinic and at a therapeutic community in Ft. Logan, Colorado; a return to school to pick up a public health certificate at the University of Minnesota; public health nursing both in Michigan and in Project Hope in Equador; and completion of a master's degree in psychiatric nursing at the University of Washington. It was there that she and Doctor Jackson met. He promptly hired her to work with Doctor Kole and himself as his director of nursing services in the Seattle mental health facility, where he was head clinician.

The first association of the three mental health practitioners was, as Doctor Kole puts it, "just one of those lucky, serendipitous things." It gave each of them a chance to work in a team orientation in community public health, discovering in which areas each did best and then learning to trust one another for filling in needed components for patient care. It was, however, a very brief idyll. Administrative problems developed at the center, and one year later they resigned as a body in protest. But they took with them a plan.

They wanted to establish a full-time day hospital for patients not ill enough to need 24-hour supervision, but still in need of medical and therapeutic care on a regular day-to-day basis. The two physicians would provide needed medical backup and oversee group therapy sessions. The nurse—as she had already been doing—would search out and coordinate community resources needed by patients and take part in group discussions.

"I wasn't sure just exactly what I wanted to do at that point," Doctor Jackson says. "About all I did know was I wanted to get out of downtown Seattle. So, exploring the idea of the day hospital with Chris, we began to move east in search of a facility. We found one almost immediately in

Bellevue—a modest surburban home we felt could be converted to suit our needs without too much trouble." At this point, Mary Elmore was asked to join the two physicians.

"I really didn't have anything else to do at the time," Ms. Elmore says. "I had no job offers and had liked working with Doctor Kole and Doctor Jackson, so when they asked me to join them, I accepted. Just what I would be doing wasn't spelled out or discussed beforehand. I think we all just assumed that I'd be doing pretty much the same thing I'd done at the mental health center—with, perhaps, more time in patient therapy."

The day hospital opened—and closed. There were financial problems, payment difficulties with insurance companies and other third-party payers. But the three remained together. Their idea of a family treatment program still seemed sound. A name occurred to them: Family Treatment Center. Another year went by. Doctor Kole purchased a three-bedroom ranch-style house in the same Bellevue neighborhood, and arranged to rent office space to Doctor Jackson and Ms. Elmore. The day hospital house was eventually sold. They were back in practice together again.

Ms. Elmore was given her choice of the bedrooms for her office. The two physicians flipped a coin for the others. They each then decorated their own office to their own taste.

"The personalization of our offices underscores our philosophy of sharing something of ourselves with our patients," Doctor Kole says. "Where I see patients, it's as though it were in my living room rather than in my office. It reflects my own taste in furnishing, the books I am fond of, the way I want things arranged."

If roles of the team members were not clearly defined—partially because they wanted the direction of the practice to grow organically—they each had their own expectation of what it would or could be.

"On those patients on which we would be using the team approach, I saw us working together for the good of the patient," Ms. Elmore says. "I would share the responsibility for patients with one or both physicians. Each of us would contribute our own professional skills. This, I felt, would operate on more than one level. For instance, with some families or individuals I saw myself working more independently, using the physicians chiefly as consultants.

"Some things I wanted to continue doing, which I told the doctors," she goes on, "like working in the community with churches, schools, vocational rehabilitation people, courts, and other public and private agencies. I wanted to help find foster homes for kids, supervise foster home care, do home visits, and all those things involving patients in real life situations. Mainly, I wanted to concentrate on teenage girls—with whom I felt I was very good—plus women who needed dependency needs met, or women who just felt more comfortable having a woman as a therapist.

On the other hand, I don't want to handle men as a primary therapist, since at that time I was still somewhat uncomfortable with them. What I didn't want the practice to be or become was a traditional Freudian 50-minute hour kind of thing where patients were seen only at prescribed times and then only in the office."

"From what I'd read and heard about joint practice," Doctor Kole says, "I felt it was pretty close to what I wanted for the Family Treatment Center. What interested me was the idea of a physician and nurse working together in an integrated relationship with one another, where the roles were not the usual sub- or super-ordinated ones you find in more traditional practices. I wanted the relationship to be one of mutual respect and support, working together as peers, as equals."

Doctor Jackson shares his associates views. "The most significant factors of our kind of practice are ease of backup coverage and ease of consultation," he says. "This means you are covered professionally and legally if you have to get away for a time, and if you need some input on a problem or patient you can get it almost immediately."

Now, in its third year at its present location on hilly Main Street, the Family Treatment Center is an unqualified success for all three of its principals. It occupies a modest, well-cared-for house, surrounded by lush greenery, in an upper-middle-class area. Only a small wooden sign distinguishes it from its residential neighbors. To the west over the crest of a hill and past the busy commercial district of Bellevue, lies Lake Washington, whose boundary on the opposite western shoreline touches Seattle. To the east, south, and north are the reaches of Bellevue, backed by hills of pine, birch, and oak.

The principals are convinced that the success of their venture stems from their team approach. "If an entire family is involved in therapy," Ms. Elmore says, "you may need more than one primary therapist—one for each member involved. At other times, one of us may feel that a patient—either temporarily or permanently—will do better with another therapist. So, then, a change is made. As for my own patients, I need the medical backup of the doctors for a number of reasons. I can't prescribe medicine and I can't admit patients to a hospital. So I am usually involved with at least one of the doctors."

It often happens that all three practitioners are involved with one family. Less often, Doctor Jackson and Doctor Kole are involved this way to the exclusion of Ms. Elmore. But, in one sense, the nurse's own patients are also patients of one or the other of the physicians. This is because of the protocol established by the practice for handling them. Thus, if in the initial visit the patient sees the nurse, the second visit will be a consultation with one of the physicians.

"This arrangement was something I insisted on from the beginning,"

Doctor Kole says. "It provided an underlying, responsible physician-patient relationship for those people for whom she's primary therapist." "Having my patients see one of the doctors on their second visit proves a very valuable procedure from my point of view," Ms. Elmore adds. "If something arises in which I need advice from them on treatment, there's no problem because they're already familiar with the patient."

Conferences on patients' needs, treatment, and the day-to-day running of the practice take place on both a formal and informal basis. Doctor Kole says, "If I'm in the middle of a session and it strikes me that the involvement of Mary might be productive, I simply go and get her—assuming she's available. Or we might get together after a session or when we have a bit of free time in the office to discuss one or another of our patients . . . or even at lunch. That happens frequently."

The Family Treatment Center is the collaborative practice of the three independent principals. Each keeps his or her own appointment book and medical records. Each has a separate phone line coming into the facility. Each bills patients at his or her own self-determined rate on a fee-for-service basis. All, however, use a common billing letterhead bearing the Family Treatment Center name.

Mary Elmore, now 41, earns about $24,000 a year for her ten-hour-a-day, six-day week. She charges a maximum of $30 an hour. This is double what she first charged. However, in the case of needy patients, the rate can be as little as $5 an hour. The hourly rate scale of the two physicians, though also adapted to a patient's ability to pay, does not range as widely as the nurse's. Each charges about $35 an hour, although, as Doctor Kole points out, when doing such things as home visits, he rarely charges for the entire time he is involved. Expenses for such things as a secretary, a janitor, and a grounds-keeper are shared by the three practitioners. The two physicians each pay two-fifths of such things; the nurse pays one-fifth. In addition, Ms. Elmore and Doctor Jackson pay a monthly rent for use of their space.

In contrast are the hours the three principals work. Doctor Kole says, "I spend almost my entire waking life at my practice." Doctor Jackson, on the other hand, spends three 12-hour weekdays and a half-day on Saturday at his practice. "I tried this schedule last summer, when I wanted more time to be with my wife and children at our cottage," Doctor Jackson explains. "Then, when summer was over, and it had worked out so well, I thought I'd just continue it. One of the things that has made this possible," he adds, pointing to a leather case on his belt, "is this 'Bell Boy,' which I always carry with me. With this, my answering service can always reach me."

Just as billing, organizational structure, and time spent in practice indicate individual practitioners under the umbrella of one facility, so do

the individual styles and approaches of the three. Doctor Kole elaborates: "I really have to say that I'm not sure what Don's philosophy is with respect to treatment. You see, though we've worked together—more closely in the past than now—we really haven't shared much in the way of our professional growth. In a way, we talk a different language . . . we think differently, which affects the kind of patients we treat and attract. I tend, for example, to have more neurotic women and have more involvement with family problems. Don, on the other hand, from what I see, seems to provide more of a counseling service. I suppose that ties in with his being called the 'Christian psychiatrist.' "

"If you compared my practice with Mary's," Doctor Jackson says, "I think you'd find that I'm more involved in short-term treatment, crisis intervention, that kind of thing. Also, I'm more cerebral. As far as our personalities are concerned, I find that, in conferences with Mary and Chris, I usually express what I *think* about something, whereas Mary is very good at expressing how she *feels*—giving a gut-level reaction. She has a real knack at expressing those kinds of basic, underlying feelings."

"I see myself, in terms of approach, at one end and Doctor Kole at the other, with Doctor Jackson somewhere in between," says Ms. Elmore. Both the doctors are more intellectually oriented and analytical than I am. Consequently, I'm more interested in helping people get in touch with their feelings. But also, I have this interest in working with people in terms of their daily experience."

The patient-load factor is one of the things that makes her work at the Family Treatment Center so satisfying to Mary Elmore. "I really like to see patients over a long period, see them grow, begin to be able to handle their problems. You don't get that in a hospital. You see them only on a short-term basis and never really get to know them or what happens to them. You sort of get the feeling working in a hospital that no one ever gets better. But they do! You can see that when you work with people for longer stretches of time."

The trio's handling of crisis intervention also takes them far from the stereotype image of detached, aloof psychiatric practitioners. "Depending on the situation," Ms. Elmore says, "we might either go to the person or have the person come to us immediately. Often we have an immediate conference with all three of us—if we're all in the office and this is warranted—to decided what to do. If we decide to go out to the person, any one of us might go. Generally it would be me, but the doctors have also done this from time to time. Or both a doctor and I might respond. It all depends on the case.

"As for suicide threats or attempts, we again get together to decide on a course of action—whether to see the patient at home, have him brought to us, whether the police should be called, or if he should be taken right

to a hospital. In the case of suicide attempts or drug overdoses, we most generally get a call from the emergency room of a hospital as our first notification. Then one or more of us will go to the hospital."

"The crisis we see often occurs in one of our offices," Doctor Kole says. In one out of ten such cases, the result is the people are hospitalized. That isn't, of course, always best for the patient. But one has to take into consideration the expectations of the community one operates in. Here, most people have a very pragmatic approach to illness—mental or somatic. They tend to feel if something is wrong a person should be taken to a hospital and be fixed—like taking a car with a defective carburetor to an auto mechanic."

"I am quite actively involved with my patients," Doctor Kole advises. "My style is not to be passive and interpretive. That's also why I'm willing to do such things as home visits—although with Mary around, I do less and less of these—and work with community agencies. For example, just recently, a woman called about her 76-year-old father. She'd been referred to me by her family physician. After talking to her, I felt I had to go out to see her parents to see what was going on. I didn't think I could get this in an office visit. Anyway, I went out and found a really intolerable situation in which two old people were living in a state of abject despair. Because there was adequate insurance, I decided on hospitalization for the man. I then saw him at the hospital and he improved. He seems to be doing well now."

"I do home visits, too," says Doctor Jackson. "I also get involved with patients' employers, schools, and so forth. I had a patient coming out of the hospital who was going into a halfway house. He seemed anxious about the transition and the facility. So I simply went along with him on a couple of occasions to look the place over, to put his mind at ease. I really enjoy home visits. They give me a better feeling for the patient's family, for what's really going on. I made one recently involving a youngster I was treating. I suspected it wasn't his pathology but the family's that needed treatment. And, sure enough, that's the way it was."

Home visits are basic to Ms. Elmore's practice. It is hard for her to conceive of being a therapist without them. "You can really learn a lot," she says. "You see a different side of the patient or family at home than you do in the office. On one case I went out on, I found that, although there were eight people in the family, there were only seven chairs at the dining room table. The patient was simply being excluded from the family's life. Or, as Doctor Jackson pointed out, you discover the patient you're treating isn't the sick one, but someone else is. Then there was the case where I was treating one autistic child and when I went to the home I found another one.

"My visits are a combination of observing, listening to people, teaching,

and being supportive. Teaching can involve showing people that their feelings are O.K., getting them away from seeing them as good or bad. Or it might be teaching people to care about but not to take care of one another's feelings, like a husband for a wife's or a wife for a husband's. With parents with teenage kids, you sometimes have to make them see that they are the *parents,* that they're in charge."

Doctor Kole feels that Ms. Elmore is better at home visits as a nurse, than she might be if she were a female psychiatrist. "The patients view her differently than they would a woman psychiatrist," he says. "As a nurse she is seen as a caring person—which she certainly is—doing caring things. Of course, psychiatrists also care, but they don't have the same image. Then, too, as Mary noted, there's a whole matter of training. That tends to make her an expert at home visits."

All three principals make hospital visits. Currently, Mary Elmore is visiting patients and writing progress notes, but she is unable to admit patients. In a sense, then, she has no official status and must rely on her physician-colleagues to pave the way for her. However, a new state law has been passed that will make it possible for specially licensed practitioners such as Mary Elmore—as well as psychologists, social workers, and psychiatric social workers—to apply for associate staff membership in hospitals in Washington. Ms. Elmore is now in the process of applying for such staff affiliation at the hospitals she most frequently uses for her patients. With such status, her modes and control of treatment could be modified or considerably expanded.

One of the patients who has been exposed to, and benefitted from, all forms of treatment given by Ms. Elmore and the two physicians is, of course, Donna Bates. Ms. Elmore has made home visits, hospital visits, helped in foster home supervision, given career counseling, and in various ways "treated" her in terms of real-life situations. Doctor Kole has made hospital visits, given individual therapy, and acted as medical backup for medication. Both have been involved in crisis intervention, family conferences, and foster family counseling. In addition, in a less formal way, Doctor Jackson has provided advice when approached by either or both of his colleagues. Also, it was Doctor Jackson whom Donna and her parents planned to see, after being referred to him by juvenile authorities. Since he was out of town when they came in for help, the case was taken over by Doctor Kole and Ms. Elmore.

Other cases highlight how Ms. Elmore serves patients when, as she puts it, "there just isn't anyone else to do the job." She once attended school for several weeks with a young girl who had developed a school-phobia. "We began by going to school—the two of us—for one hour the first day. The second we went for two hours, and so on. Then, after we were there the whole day, I began decreasing the time I would spend

with her, until she was finally going alone."

Ms. Elmore uses many outside resources in treating patients. She takes young girls camping, with a middle-aged woman to share the responsibility for the youngsters. She uses an 81-year-old woman who was a former personnel director to give patients tips on career preparation and job interview skills. When young children come to her as a family member of a patient she is treating, she refers them to a local child psychiatrist.

Ms. Elmore sees herself clearly as a nurse. "I may do many of the same things the doctors do," she says, "but I do them with the benefit of different training and different work experiences and with a different viewpoint or outlook. I work more with people in relation to their feelings and see a patient as a whole person—in terms of both his body and psychic well being. By contrast, the physicians are more concerned with diagnostic entities, because they have more education to fall back on.

"I suppose I could say that I'm different from the physicians because I offer a woman's viewpoint. But, of course, I could be a psychiatrist and offer that. In that case, I still think that as a nurse I would be different than as a doctor. It's hard to say just why. I don't think as a psychiatrist I would be trained to make home visits, or make them in the same way. Also, as a psychiatrist going into a home, I would have a different effect on the people. I'd be more threatening so they might get their guard up and I wouldn't see the same things I can as a nurse."

"My style is just different from Mary's," Doctor Kole says. "Being more receptive, I think she's better with patients with identity problems. As a more active change agent, I think I do better with neurotic problems. But I don't think that because we do the same kinds of things that this makes her a physician or me a nurse."

Ms. Elmore has a set of warnings for nurse practitioners thinking of joining physicians as equal partners. "The nurse should have a good educational base," she says. "She should be innovative and like to work independently. She should be willing to accept the responsibility for freedom such a practice involves. She should have several years of working experience. And she should be prepared to be poor for a while unless she has another source of income. If she has all that plus confidence in herself, can do quality work and help people get well, I think she'll make it."

R.O.

FRIZZELL AND FRIZZELL

Among the several shingles that identify the occupants of the Hospital Medical Pavilion, a professional office building in the conservative mountain town of Frederick, Maryland, are two that are conspicuously revolutionary. One of these reads: "James A. Frizzell, M.D." The other reads: "Jean S. Frizzell, Adult Nurse Practitioner."

The two Frizzells, who are husband and wife, were Frederick's introduction to the phenomenon of joint practice. That was in the late summer of 1974. The Frizzells knew there would be problems associated with the type of practice they planned. And problems began when the Frizzells, newly arrived in town from Hanover, New Hampshire, signed the lease for their office at the Pavilion, and ordered the customary shingles. The signs were ready on Tuesday.

"We went down to the shop," Jean Frizzell says, "and there was only one sign. It said: 'James A. Frizzell, M.D.' Well, I wanted to know why, and the sign man said ask the building. The building administration said that space in the Pavilion could be rented only to doctors.

"Well, Jim and I decided that if they wouldn't take both our shingles, we didn't want an office in the building. Then the administration of the building resolved that particular question and we moved in. But it was an alerting experience. It was a foretaste that it might be a while before we began to be accepted. But it also indicated that we were going to win. So we hung on."

A second minor incident occurred soon enough. As is customary, the Frizzells drew up an announcement of their newly opened practice, and as a courtesy, showed a draft of the announcement to the local medical society. "After discussion with the society's officers," Jean says, "Jim and I talked it over and we settled on a compromise announcement, which was approved by the society. It read:

JAMES A. FRIZZELL, M.D.
Announces the opening of his practice of
Internal Medicine and Gastroenterology
JEAN S. FRIZZELL
Adult Nurse Practitioner
will be associated with Dr. Frizzell

A major problem that was not anticipated centered around indepen-

dent referrals by Jeanie to physicians. At first they seemed generally accepted. But storm clouds arose when a letter came to Jim from the local medical society noting that complaints had been received at the society office because Jeanie had referred patients directly to other physicians in the area. The letter said, "In checking with the State Medical Society, although they agree there are many 'gray' areas concerning adult nurse practitioners and their duties in this state, they stated unequivocably that all referrals must come through a physician. Apparently this includes laboratory and x-ray requests."

"This objection to our philosophy of caring for patients came as a surprise," Jim says. "It was a source of great concern for us, so we communicated with Doctor Dewitt Delauder, president of the Maryland Board of State Medical Examiners. It was his opinion that our approach to patient referrals was legal and appropriate and that any complaints should be referred directly to the State Board of Medical Examiners."

The referral question has not been resolved and remains a problem for the joint practice. It has resulted in Jeanie referring patients with certain problems to physicians cognizant of her abilities and functions, or requesting that Jim refer the patient in *his* name to those physicians who may be concerned about the legality of accepting referrals from a nurse practitioner. Jim says, "We feel this is a ridiculous arrangement but the patients' needs come first."

Still unresolved is Jeanie's ordering of laboratory and x-ray requests. The local medical laboratory is cooperating to provide results to the Frizzells without encroaching upon the law. Jim and Jeanie feel "it is best to live with these inconveniences to our practice and work towards improvement through permanent resolution by appropriate governing boards."

The Frizzells came to Frederick after spending much time and effort in researching the town and its health care needs. Their object was to see if their particular skills and the unique form of their practice could succeed there. It seemed the ideal place for them.

Through their research, the couple learned a lot about the town itself and about the health care community. Frederick, which has a population of 27,000, is the seat of Frederick County, the largest county in land area in the state of Maryland. It was named for the sixth and last Lord Baltimore, Frederick Calvert I. During the Civil War, on September 10, 1862, elements of the Army of Northern Virginia marched up Patrick Street past the house of Barbara Fritchie—the Barbara Fritchie whom John Greenleaf Whittier later immortalized in his poem: "'Shoot if you must this old grey head, but spare your country's flag', she said." Because of its location, Frederick was familiar to many Civil War soldiers, including those headed to the battle of Gettysburg, 36 miles to

the north. Today, Frederick and its satellite towns are the battlegrounds of antique buffs.

Its economic status, the Frizzells learned, is unusual. Frederick has an assortment of light industries around town, but was once best known for its limestone and concrete and for its milk. The dairy herds have thinned, farms have closed down, and the area's farms are now being bought by white collar workers and professionals who work in Baltimore and Washington 50 miles away.

As Frederick evolved from a light-industrial-argicultural center to a bedroom community, its population slowly increased. However, lacking the bustle and excitment of the big city, it failed to attract physicians. In reading the 1974 report of Frederick's Comprehensive Health Council, the Frizzells discovered that Frederick County had one physician per 1,500 persons, considerably under the ratio of the state's one to 685 and the nation's one to 1,000. All of Frederick County, they found, had but 62 physicians and 258 active licensed nurses, all of whom practiced at the county's only hospital, the 197-bed Frederick Memorial Hospital. The need for health care practitioners was one of the compelling reasons that made Jim and Jean Frizzell decide to settle in Frederick.

Jean Frizzell—whose friends all call her Jeanie—is a slim woman of 29 who always comes right to the point. Her blue eyes stare right at you from behind her mask-like, Sassoon hair cut. Jim Frizzell, a short, lean man of 31, has a traditional New England reserve and quiet tenacity.

The Frizzells met in the summer of 1964, while both were in college. Three years later, they were married. In 1968, he received his M.D. and she a bachelor of nursing degree, both from the University of Vermont. It was during those years at Vermont that the couple first got the idea of joint practice. Jim served his internship at Denver General Hospital; Jeanie found a place as a staff nurse in the emergency room there. When Jim rotated through the emergency room, the two found they worked well together, and the idea of joint practice intrigued them again.

After his internship and a residency at Dartmouth Medical Center—while Jeanie worked as head instructor of the department of medical-surgical nursing at the Mary Hitchcock Memorial Hospital School of Nursing—Jim was obligated to enter military service. Since Jim was stationed at Fort Meyer, Virginia, not far from Washington, D.C., Jeanie was able to study for a master's degree in nursing at the Catholic University of America. She received it in 1973.

Jim remembers well the actual decision to go into joint practice: "When Jeanie went to graduate school, during my time in the army, we definitely decided to go through with it. In fact, she worked it so that she took her elective time with me in the Radar Clinic at Fort Meyer, observing and considering how a nurse practitioner might work with a

physician."

After his military service, the Frizzells moved back to Hanover, New Hampshire, where Jim had a fellowship in gastroenterology at Dartmouth. The next step for Jeanie was to take nurse practitioner training.

"The nurse practitioner program had just opened at Vermont," Jim says. "Jeanie wanted to enter it, but first she would have to find a physician who would be her preceptor. It couldn't be me, because I was still in training. So she canvassed every physician within 30 miles of Hanover and finally found Doctor A. J. Yuskaitis. During her preceptorship, Doctor Yuskaitis gave her great responsibilities. He taught her to do physicals and to evaluate problems. He was anxious for her to do as much as she could do. She also learned how to set up a medical office, one of her major functions in our practice. All this wasn't too easy for her. We had just had our baby. And since she had to commute some 90 miles a day, she had to line up baby sitters, and so on."

The Frizzells spent a good nine months deciding where to start their joint practice. They investigated and visited a number of towns around the country—many cities in New Hampshire and Vermont; Middletown, New York; Hagerstown; and finally Frederick. There were two big factors involved. They wanted to settle in a community they liked; and they had to settle in a community that had need for Jim's skills as a gastroenterologist.

Their choice of Frederick has worked out most satisfactorily. The Frizzells say: "The consumer has been an important determiner of successful role innovation." Jim notes that "as Jeanie is provided with opportunities to articulate her role in the practice, we have found both peer and community acceptance." In the first six months, the number of regular patients in the practice grew to 490, with a total of 659 patients seen. Jeanie sees two new patients plus four follow-ups a day, and Jim has one new patient, one new consultation, and four follow-ups a day. Their combined gross income, they estimate, will rise in the next few years to around $60,000 a year.

A. Austin Pearre, M.D., chief of staff at Frederick Memorial Hospital, recounts his first reactions to the Frizzell's plans for a joint practice. "I talked to them one afternoon when they were looking for a place to stay. I was a little surprised, of course, when they told me the nature of their practice. But my feelings were that, since so many people were looking for a physician—looking for some way to get plugged into the health care system—the idea might work, with time. People would just have to learn about the practice and get used to the idea. If there were enough people around who needed physicians badly, the practice would succeed.

"There is no competition in this particular area," Doctor Pearre notes.

"That's what makes the Frizzells welcome, I think. It's amazing how little feedback I've gotten—positive or negative—which is probably a good sign. I think maybe they came to the right place at the right time.

"My own office has been closed to new patients for years, so when people call looking for a doctor, I often refer them to Doctor Frizzell. Also, I have used Doctor Frizzell as a consultant on GI cases."

Every new patient of the Frizzells is required to start with a complete history and physical and, if indicated, an EKG, chest x-ray, immunizations, sigmoidoscopy, and laboratory work. In *Rules of Practice*, a pamphlet given to new patients, the Frizzells encourage patients to schedule annual visits to monitor pertinent aspects of their health status and to obtain laboratory data. Each patient is made aware of the schedule of fees for services. The schedule is posted in the waiting room.

The character of the physical examination that Jean and Jim give a patient reveals much about their approach to patient care. It also tells much about the perspective that each brings to the practice. Jim is more disease-oriented than Jean. Jean's nursing background makes her more health education oriented. Neither of the practitioners merely goes through the motions in caring for their patients. They thoroughly evaluate each person who comes to them as a patient.

"I came here for a physical first," a young woman referred to the Frizzells says. "Mrs. Frizzell did the major part of the examination. Truthfully, it was the most detailed, complete physical I have ever had in my entire life: The complete history, as well as the physical exam itself. I didn't have a pelvic exam at the time, because I was planning another pregnancy and was going to my obstetrician. But she did everything else and was most thorough. She found something she didn't like and went to check with Doctor Frizzell. He came in and checked it and explained everything about it. They were both very good in their explanations.

"Now, I am pregnant. Three weeks ago, I had an extremely sore throat. I called my obstetrician first of all, and he said I should see my internist. So I called up and found I could be seen immediately that day. That was very important to me. The Frizzells took care of the problem right away and with no medication, because it was viral. I appreciated that. I'm not one for a lot of heavy medication.

"Doctor Frizzell himself called me with the laboratory report and he talked to me about the fact that there was no need for medication. I thought it was great that he took the time to do that."

Another woman patient says: "I was referred to Doctor Frizzell shortly after they came here. I had had a family doctor for many years. I had become dissatisfied with him because I had a complaint that he didn't take care of, and I really had a rough time of it. He was treating me for

lumbago, when I really had a kidney stone. After a while, the kidney had to be removed. Also, my family doctor has been treating me for a condition I really didn't have. I had been taking medication for this 'condition' for about two years. I came to Doctor Frizzell and he diagnosed it as something entirely different. And he was right. The first doctor was treating me for a heart condition and I was taking nitroglycerine. Doctor Frizzell had me take an upper GI series and he told me that the problem was some kind of esophagus trouble. I am not now on any medication, and I feel great. I elevate my bed, take some Maalox when I feel uncomfortable, and I have had no trouble since."

A general surgeon, Edward Solano, M.D., assesses Frederick's new practitioners: "I am very impressed by the amount of detail they become involved in with their patients. They give a tremendous examination to the patient. Jeanie has had very good training. She is very competent. Her knowledge is very good. Also, she has a close alliance with Jim on difficult cases. She referred a woman to me with breast disease. Before the patient arrived, she sent me a copy of her history and physical, with many details. I was very impressed. I even said to my wife, 'You don't see this kind of history and physical taken any more. It's like what you see in medical schools.'"

Jeanie and Jim Frizzell work together, yet independently. Each has an office for interviewing and examining patients. The offices connect by a common door through which they pass to consult several times a day. The Frizzells are active, compulsive, goal-oriented persons. Both are in constant motion, he quietly, speaking sparingly; she, in a running monologue which is punctuated only by questions and the necessary pauses for hearing the answers.

Each patient who comes into the office is greeted warmly by Janet Snyder, the receptionist, who doubles as bookkeeper. "I enjoy being with people," she says. "It's my job to put the patients at ease while they are waiting to see the doctor or Mrs. Frizzell."

Behind Janet's waiting room is a small office occupied by Shirley Albright, medical assistant and secretary. In addition to helping Jim give proctosigmoidoscopic examinations, doing EKGs, and assisting with examinations, Shirley does such things as typing the dictated medical histories and photocopying EKG tracings for patients to keep in their purses or wallets. "If a patient has his baseline EKG available and he gets into trouble," Jim says, "the doctor can compare EKGs and make a diagnosis more quickly." The Frizzells believe very strongly that patients should have as much information about their bodies as possible.

The arrangement of the Frizzell office and practice did not just happen. It is the result of conscious planning based on Jean's postgraduate study of administration. "Jim knew nothing about setting up a practice,"

says Jeanie. "In my master's degree program, I learned about business management and how to set up a practice. I also learned about record keeping systems."

Jim confirms what Jeanie has said. "You can't imagine what goes into setting up a practice. What kind of typewriter do you buy? Do you use dictating machines or do you write your notes by hand? Which file system is best? Jeanie went to different practices and studied them before we set up ours."

Jim goes on to explain that he and Jeanie worked out their individual roles and that they are constantly refining those roles. One of the basic elements of their practice is a set of protocols, for example, for treating hypertensives or diabetics. Jean breaks in: "We spent months ironing out these protocols. Things did get hairy at times and Jim would say, 'All right, what medical school did you go to?' and I would say, 'I didn't go to any medical school, but I can read and I've gone to lectures.' "

According to Jim, Jeanie does much that is customarily done by a physician and he does things that are traditionally done by a nurse—giving injections, for example. "She does some things more efficiently than I do," Jim says, "such things as teaching self-examination of the breast. I'll often ask her to excuse herself from her patient and come over and teach this to a patient I have in my office. She knows how to do it better than I do, and the female patients are less embarrassed.

"Of course, Jeanie does some things her way and I do some things my way," Jim says. "We don't see eye to eye on everything; on the format of the complete history and physical, for example. We respect each other's opinions, however. Jeanie, for instance, regularly does tonometry. Well, it's a good idea, but I don't do it routinely. Maybe I'll start, though."

Jeanie continues: "Jim never used to look in ears routinely. He thought it was a waste of time. He used to say, 'If a patient has problems, he is going to have symptoms.' Well, now Jim looks at ears. He started doing it after I had called him three or four times and said, 'Hey, Jim, come in here. I'm looking at an ear and I think it's otitis externa, or something like that.' This is what I think preventive medicine is. Jim is more wrapped up in caring for sick patients in the hospital."

Jeanie Frizzell believes that being a nurse practitioner would be more difficult for her if she were in joint practice with someone other than her husband. "I'd have to find a physician who agrees with my philosophies," she says, "and then we'd have to plan these things out together."

As for Jim, he pays this tribute to Jeanie: "She is not an ordinary person. There are very few people who have her qualifications as far as intelligence, education, and tenacity go. It would be difficult to find someone who could do what she has done."

The Frizzells spend a great deal of time in their joint practice—

Jeanie thinks it may be too much—but they do not see themselves married to it. Jeanie and Jim lead a quiet home life, trying to find time for such things as research and writing. Jeanie says that she "enjoys being a mother and having a family. That's why I don't want hospital privileges. When five o'clock comes, I try to be finished for the day."

T.B.

THE HI-RISE TEAM

Marguerite Velderman, a woman of 81, stands with a shopping bag in each hand in the ninth floor corridor of the Edgerton Hi-Rise, an apartment complex in St. Paul, Minnesota, waiting for the elevator. She has rung the bell a dozen times. And still no elevator. Is something wrong? Should she risk the stairs? She rings the bell again. She listens. There is no sound from the elevator shaft. Mrs. Velderman makes up her mind. She opens the door to the stairs, and begins the long descent.

Some minutes—an eternity—later, Mrs. Velderman emerges from the stairway into the first floor corridor. Her legs ache, she is out of breath, she feels faint. A woman sees her tottering there, and hurries to her side.

"Are you all right?"

Mrs. Velderman tries to speak, then nods her head.

"I don't think so," the woman says. "I think we'd better go see Ann."

Ann is Ann Thomas, a nurse practitioner. She is stationed in the Hi-Rise Clinic, a three-room facility that serves the residents of the Edgerton Hi-Rise, all of whom are elderly or disabled people. The facility, one of the first such geriatric clinics in the United States, is also one of the few such clinics embodying a joint practice of nurse practitioner and physician.

Mrs. Velderman is received at the Clinic, just down the corridor, by Edith Brommer, the receptionist. She is helped to a chair. A moment later, Ann Thomas appears. She is 26 years old and dressed in a pink pants suit, but she is obviously a professional.

Ann's professional history begins with a degree in nursing from the University of Minnesota, in 1971. After graduation, and while her husband was in the service, she put her knowledge to use on a part-time basis in a California Army hospital. Later, after her husband's discharge, the couple returned to Minnesota—to St. Paul—where Ann obtained a position as a medical/surgical staff nurse in a private hospital. It was a job, but not a satisfying one.

"The environment at the hospital was so different from that at the university or the Army hospital," she says. "The doctors didn't encourage questions from the nurses. We were lucky to even get an answer. I didn't really feel involved in total patient care. I didn't feel, as I wanted to feel, as part of a team. I was just expected to follow the doctor's

orders. It's very different here at Hi-Rise. I have responsibility, and I feel responsible. Geriatrics is total patient care."

Mrs. Velderman is one of the approximately 400 senior citizens currently being seen at Hi-Rise Clinic for medical care of one kind or another. Some of them are primary care patients who rely solely on the facility for their medical needs. All of them are seen by Ann Thomas, who attends the Clinic three mornings a week. They are also seen on occasion by a physician, Robert A. Derro, M.D., and a resident physician, currently Edward LaMotta, M.D. These three make up the Hi-Rise medical team. Other patients—from the building or the neighborhood—have their own physicians and use Ann's services on an occasional basis, for such things as blood-pressure checks and health-habit counseling.

The idea behind Hi-Rise Clinic, which opened in March of 1974, goes back to early 1970, when St. Paul's Housing and Redevelopment Authority (HRA) first considered erecting the senior citizen building now housing the unique facility. According to an HRA spokeswoman, no one person was responsible for placing the Clinic in the setting. Rather, it was discussed at length for almost a year with suggestions coming from various groups and agencies—the Junior League, church organizations, community centers, and neighborhood social action groups.

At the time, HRA already had a similar mini-clinic operating with a regular nurse in a housing project for low-income families. The next logical step seemed to be a clinic for the elderly. The agency's main concern—aside from specifics on its operation—was that it would serve all seniors in the immediate neighborhood of the building and not merely the building's tenants.

The first big step in getting Hi-Rise past the discussion stage was involving St. Paul-Ramsey Hospital and Medical Center, the huge city-and-county-operated health care complex. In March 1972, HRA approached St. Paul-Ramsey to see if it would assist in formulating plans for the Clinic and eventually administer the care it would offer. The hospital expressed interest, got several of its people involved with checking blueprints and plans, and awaited developments. A few months later HRA came up with a proposal under which it would provide free space in the building in exchange for the hospital furnishing medical services, including personnel and equipment.

The key to St. Paul-Ramsey's involvement in the project was the hospital's then newly-instituted Family Practice Department. Vincent Hunt, M.D., head of the department, and Doctor Derro, then a newcomer to its staff, were both extremely interested in community-service, on-site facilities for the medically under-served. They were in the process of planning a larger clinic several blocks from the proposed new

building, which seemed a logical support source for the smaller one planned at Hi-Rise.

Basic to the concept of the Hi-Rise Clinic as envisioned by Doctor Hunt and Doctor Derro was the use of a nurse practitioner. Ms. Thomas explains how she happened to become involved.

"I read a piece in the paper about the nurse practitioner program at the University of Minnesota. I was interested, but merely as a means of furthering my education, not in terms of putting it to any practical use. I called Eva Anderson, the head of the program. She said they couldn't have me on that basis. Then I called Ms. Ann Hilestad, an OPD nursing supervisor at Ramsey and talked to her about working there and about enrolling in the university's nurse practitioner course. Ms. Hilestad told me that a clinic was in the planning stages for the Hi-Rise and that Doctor Derro and the other physicians who would be working in it might act as my preceptors in the program if I was interested. I was."

Ann was accepted at the university program with Ms. Hilestad's help and through her communication with Doctor Derro, Ann secured a preceptorship in Ramsey Hospital, and as things worked out she'd be finishing her training just in time for the opening of Hi-Rise.

That training was designed specifically to provide health care for the elderly where such care was lacking. Included in the five-month course were physical examination procedures, history-taking techniques, disease processes, management of minor acute and stable chronic problems, and something about the various body systems.

Although Ann was knowledgeable, both she and Doctor Derro were aware of certain inadequacies. As Doctor Derro explains, "Mainly, she was missing technical skills—essentially the same as those medical students lack—such as eliciting pertinent historical information, not getting sidetracked in unproductive areas, ongoing evaluation of information, and using the stethoscope and other instruments.

"The formal curriculum was worked out and administered by the School of Public Health," he continues. "The clinical experience—working on histories and physicals, reviewing histories and physicals, going over specifics on the physical exam—were all done with me or under my supervision. These things comprised my contribution as her preceptor."

Physicians were not, however, the only medical practitioners responsible for Ms. Thomas' training. "About half came from nurses," she says. "And I also visited the clinic already established by HRA. I talked to the nurse there, who was practically running the whole show by herself—but in a more limited way than we planned at Hi-Rise. Her clinic was set up in any room that happened to be available when she came

by once a week. She didn't have any lab facilities, and she was doing mainly physician-referral work. Nevertheless, it was invaluable talking to her."

Ms. Thomas' duties at Hi-Rise were never stated in specific terms. They were developed as she completed her training, in discussions with Doctor Derro and Doctor Hunt. These discussions were a give and take affair, with her opinions considered and respected.

"It wasn't as though I was trained and then came on a job," she says. "Rather, it was as though once I did get into the Clinic it was more like a continuation of what I'd been doing in school. You could really say that as my training progressed, the concept of my job in the Clinic expanded.

"I've always felt," she says, "that what the elderly really need is someone to listen to them, to know that someone is interested—someone who can spend some extra time with them. They need to have their problems explained, what can be done about them, and why the doctor is doing what he's doing. Often a physician will give a medication and not tell the patient how long he should be on it or about possible side effects. Or sometimes the physician does tell the patient these things and these older people just forget. These were some of the kinds of problems I hoped to solve when I got into the Clinic."

As the tenants began filling the apartments of the newly-erected Edgerton Hi-Rise, Ms. Thomas completed her training, and last-minute preparations for the opening of the Clinic were initiated. A tacit understanding between the new nurse practitioner and her physician-preceptor had already established that she was the right person for assuming the responsibility of the day-to-day operations of the Clinic.

With moving vans arriving daily to set up the new homes for the building's senior citizens, Ms. Thomas initiated the Clinic's record system, ordered supplies, and supervised the installation of equipment. On a more personal level, she wrote letters to every occupant of the building, introducing herself and inviting the newcomers to visit the Clinic for a friendly cup of coffee and a free blood-pressure check. Included in the letter was a brochure she had helped prepare, which outlined the services the Clinic would offer and how it would work with the tenants' own private physicians.

Meanwhile, Doctor Derro sent a large mailing to physicians of Hi-Rise residents announcing the opening of Hi-Rise, outlining how it would operate, and explaining how it could help both private physicians and their patients. It was also intended to allay the fears of private practitioners that the public giant of St. Paul-Ramsey might take patients away from them or in any way disturb the relationship between them and their patients.

"We were sensitive to those fears," Doctor Hunt says, "and wanted to nip them in the bud. So we emphasized that when patients who had their own physicians came to the Clinic, our only interest would be to provide supportive care. Also, we pointed out that if a patient didn't have a physician we wouldn't try to push him into the Family Practice Department of the hospital, but would advise him that he'd do just as well getting a private physician."

Even before the mailing went out, Doctor Derro and Doctor Hunt initiated contact with the Ramsey County Medical Society to inform them about the Clinic and the anticipated relationships with private physicians. In fact, Doctor Derro, Doctor Hunt, and Ms. Thomas met with representatives of the medical society on two occasions. Initially, some reservations were expressed, but their misgivings were ultimately allayed and the society representatives asked that they all meet again after the Clinic had been in operation for six months. "At the end of that period, the Executive Committee of the Medical Society expressed clear-cut support for the Clinic," Doctor Derro states.

The use of a nurse practitioner at Hi-Rise had been a basic concept in the operation of the facility. However, the nurse was viewed as part of a team rather than an independent practitioner. The nurse practitioner seemed best suited to the level of care envisioned at the limited-equipment office. It was also felt that a nurse practitioner would afford the patient a sense of continuity of care should they become hospitalized. Since her duties would include both seeing patients on a regular basis at the Clinic and during possible confinement, patients wouldn't suddenly feel abandoned at St. Paul-Ramsey. In effect, she'd be a link between home and hospital. In this context the hospital visits would also help physicians with follow-up after a patient had been discharged. Since the nurse practitioner would be in on everything that happened during confinement, she could bring that knowledge to follow-up home care.

The nurse practitioner-physician team concept was largely developed by Doctor Hunt and Doctor Derro. The former had worked with nurse practitioners at Hennepin County General Hospital, just across the Mississippi in Minneapolis, and, through his association with the University of Minnesota, had been on the planning board of the university's nurse practitioner program. And Doctor Derro had come to St. Paul-Ramsey from an inner-city clinic in Nashville, Tennessee, where nurse practitioners were used extensively.

"At first," Doctor Hunt says, "we thought of using Doctor Derro and me as members of the Hi-Rise team in conjunction with our resident physicians. Then we saw the opportunity of an educational experience for the resident doctors and a nurse practitioner. We wanted them to

work together in an environment of mutual respect. We wanted our young physicians to learn what a nurse practitioner was and what she could do. A lot of our people go from the Family Practice Department here into practices in rural communities that are medically under-served. And those are the communities in which a nurse practitioner can really help a physician."

"I thought the nurse practitioner would be especially suited to a geriatric practice," Doctor Derro says, "because I feel nurses have the most to offer chronic patients over a long period. Not that she couldn't be trained to deal just as effectively with acute patients. You could, for example, put a nurse practitioner in an emergency room where she'd be very valuable indeed. But, of course, that would be a waste of her talents, since you could probably train a non-nurse to do just as well."

When Hi-Rise Clinic opened on March 24, 1974, it was soon obvious that Ann Thomas would not be wasting either her talents or her time. Response to her presence was immediate, with patients entering her office in ever-growing numbers. Obviously, the Clinic supplied the answer to a significant medical need.

Since that opening, the Clinic's operating procedure has altered very little. The main change has been the addition of Edith Brommer to the staff as receptionist-bookkeeper, duties at first performed by Ms. Thomas. The effect has been to free more of the nurse practitioner's time for patients and independent study.

The Clinic is open from 8:00 a.m. until noon, Mondays, Wednesdays, and Fridays. Ms. Thomas is on duty on all three days. She gives complete physicals, takes histories, checks blood pressure and heart rates, treats minor complaints. She occasionally makes house calls to patients in the building for emergency or hospital follow-up care. All this is in addition to monitoring heart patients, ordering and doing lab work (in her tiny lab), consulting with Doctor Derro and the resident physician on treatment plans, and providing a wide span of health education.

Ms. Thomas' approach to patients varies depending on whether the person is a primary-care patient (treated only by the Clinic) or has his or her own private physician. "Those with private doctors come in for many reasons," she says. "I don't have the leeway to intervene with them as I do with our primary-care people. So if the private-physician patients come in for an eye or ear infection, or something that doesn't need a prescription, I may advise or help them. But if I don't feel qualified to handle the condition, I immediately refer them to their own physicians with a referral letter. The important thing is, I don't treat them unless their physicians tell me to."

The largest percentage of her patients are those suffering from hypertension. She monitors them according to a protocol that she developed

with Doctor Derro. "Other chronic diseases and some minor acute illnesses are treated according to protocols which are mainly in my head, rather than being written down somewhere.

"But," she adds, "I can call Doctor Derro, Ed LaMotta, our resident physician, or the Family Practice Clinic down the street at any time for answers to my questions. I can even get help from the specialists at St. Paul-Ramsey's Medicine Clinic where I work part-time, or from that department's interns. It's wonderful! I can learn from all of them!"

On Thursday mornings (and sometimes during Friday Clinic hours), Doctor Derro makes an appearance at Hi-Rise. He spends most of his time there auditing the charts of Ann Thomas and the resident physician, the formal means of monitoring patient care at the Clinic. He sees about 25 percent of the primary-care patients, and none of the others, unless an emergency arises while he is there.

Those primary-care patients he does see are selected by Ms. Thomas, Doctor LaMotta, or both. In addition, he sees others based on information he finds when auditing the charts of his two team mates.

On his occasional Friday visit he may drop in to discuss a patient's problems with the patient himself. Or he may want to see a patient with Ms. Thomas or Doctor LaMotta. And, not infrequently, all three become involved in these patient consultations.

"I see my role at the Clinic as essentially the same as it is with resident physicians in the Family Practice Department," he says. "That is, I see myself providing support to Ann, being responsible for reviewing her work, checking the accuracy of her information, reviewing her performance on the physical exams, and acting as a consultant on particular medical problems as they come up. The resident's role in relation to Ann is similar—to provide her with backup and consultation."

Doctor LaMotta is at the Clinic on Friday mornings. He sees all primary-care patients after Ms. Thomas has developed a preliminary problem list; the two confer on a treatment plan. "I'm generally called in on a case where Ann has already initiated treatment and we get together and talk over the case. It's sort of an educational experience for both of us. Ann is very particular about that. She wants to be in when I talk to the patients or go over my physical findings with them."

This method of operation means, of course, that Ms. Thomas sees a great many more patients than either Doctor Derro or Doctor LaMotta. Whereas Doctor Derro sees about three per week and Doctor LaMotta about five, she averages about ten per working day. Moreover, the time spent with patients differs considerably. Ms. Thomas sometimes takes as long as an hour and a half for a complete physical and history, as compared with a usual 15-minute visit with the physician or resident.

The duties of Ms. Thomas, Doctor LaMotta, and Doctor Derro at

the Clinic, are interesting to compare. There are very few functions that only the physicians perform. These include: Auditing charts, pelvic examinations, and in-depth physicals related to muscular-skeletal disorders. Ann's duties include such things as complete physicals, history taking, blood-pressure tests, dispensing flu shots, and, significantly, seeing patients by herself.

"The big difference between Ann and me," Doctor Derro says, "is the time spent with patients and the quality of the time we each spend. Like most nurses, Ann has a particular facility for listening, of being aware, that most physicians, including myself, don't have."

"Also," adds Doctor LaMotta, "Ann has a more ongoing relationship with the patients. And she's tuned into their psychosocial needs and problems. Probably, I'm a bit more paternal or threatening to them."

A good example of Ms. Thomas' concern for patient needs that fall outside the range of regular medical care is her willingness to help them file or process their Medicare bill or search out low-priced prescriptions.

"I've seen her calling here and there to figure out some Medicare mix-up for someone," Doctor Hunt says. "For this age group this is particularly helpful."

Doctor LaMotta concurs by adding, "Heck, she'll phone five or ten pharmacies just to get the rock-bottom price on a drug. When you consider some of our patients exist near the poverty level and often have to take a great variety of expensive medications, that can mean a lot to them."

That kind of concern and follow-through service makes for an unusual kind of medical provider and facility. Add to this the fact that Ann—and occasionally Doctor Derro and Doctor LaMotta—make home visits in both the building and the community, and that Ann sees all her patients when they are hospitalized—on regular morning rounds with her doctor-colleagues for primary-care patients, and on her own time for patients with other physicians—and it is easy to see why the Clinic's patients themselves consider Hi-Rise unique.

"Oh, yes, it's different here," one of the patients says. "They pay more attention to you. You get more care and consideration. Why, I feel that Ann is at my beck and call all the time."

Mrs. Velderman adds a comment repeated by many other Hi-Rise patients. "I feel closer to the doctors here than I ever did with any others. Doctor LaMotta said to me just a while back, 'Mrs. Velderman, we're just going to have to face the fact that you'll never make another 50 years.' I like that. It really made me feel good."

The successes of Hi-Rise extend, however, beyond patient acceptance. As Ms. Thomas says, "The most important thing we've accomplished is improving the quality of care. This is because there is more communica-

tion going on, because there's more continuity of care, and because there's better understanding on the part of the patient of what we're doing. True, for many of our patients there isn't much that can be done for their medical problems. But, knowing that someone cares and is doing as much as can be done for them is a great comfort to patients.

"Of course, there's also the matter of convenience for them. With those that live in the building, we're right here, so there's no problem of transportation."

Ralph McDonough, a 73-year-old, private-physician patient, eleborates on Ms. Thomas' last point. "It's wonderful for me, having the Clinic available, because I have trouble getting people to take me to the doctor's office. And since my stroke in '72, I don't like to go on my own and do all that waiting out there. It's a lot handier at the Clinic."

The advantages of Hi-Rise to private physicians availing themselves of Ms. Thomas' services must also be included in the successful aspects of the Clinic's record. "Aside from my allowing them to concentrate in areas in which their skills lie, their patients are just getting better care," she says. "The patients are also more apt to follow their recommendations, because I'm around to explain the importance of the physicians' orders. For example, I follow a number of people for weight loss—people the doctor has been telling for years to lose weight. Well, by working with them consistently and by setting up programs, we can really get results. And the doctors are just amazed! But the thing is this: So much of health care is teaching. Especially with old people. And that is the one thing the physician usually doesn't have the time to do."

Doctor Derro adds, "Ann teaches resident physicians about the communication needs of the patients in rather subtle ways. When the previous resident finished his training here, I could see the change in how he related to these people. In fact, by the time he graduated, he was almost a duplicate of Ann in being open, sympathetic, and taking time."

Ms. Thomas' ability to "educate" the resident physicians—or at least to change their opinions regarding nurse practitioners—is confirmed by Doctor LaMotta.

"To be truthful, I was a bit apprehensive when I first started here. You hear a lot of pros and cons in the medical community about nurse practitioners. And let's face it, medicine is a kind of paranoid science. So, if a physician comes across something amiss, he tends to think someone else has screwed up somewhere along the line. Now, the fact that a nurse practitioner may be sharing the physician's responsibilities adds to his fears.

"But I've been very impressed with Ann's expertise, and with her knack for knowing when to ask for help. The result is, I'm so sold on the nurse practitioner idea, I'll be spending a month up in rural Minnesota

shortly working with a physician whose practice includes a nurse practitioner and a paramedic. Also, my plans now call for me going into a rural setting myself when I graduate; and I'm seriously considering bringing a nurse practitioner in with me."

The manner in which Hi-Rise has integrated its health care with services of other social and medical provider agencies further attests to its value to the community. Elaine Anderson, coordinator of social services for HRA, who visits the Edgerton Hi-Rise regularly, says, "Ann, the social worker at the building, and I have regular monthly meetings. We go over problem cases and see how we can help each other out. I get involved in a variety of social services and crises intervention and Ann is really a big help to me."

Marion Gepner, the HRA social worker who has a part-time office just down the hall from the Clinic and who attends the monthly meetings with Ms. Thomas and Ms. Anderson, says, "Ann and I work together in a lot of ways. If I call on someone in the building who is ill, I get in touch with Ann. Or if I need information on a sick person I'm dealing with, I get help from Ann.

"It also works the other way around. Ann often calls me in. She'll tell me about someone coming home from the hospital, who might need Meals-on-Wheels or household help. Together, we try to give the sick person in the building the sense that someone is always around who cares. You see, on days Ann isn't in her office, I'm here in mine."

Cross-referral of patients also takes place between Ms. Thomas and the public health nurses at Ramsey County Nursing Service. Linda Rother, a public health nurse, tells of one such case. "We had a lady in the hospital referred to us with a host of problems. She was to be put on a dialysis machine. Our agency was asked to see her on discharge from the hospital.

"Well, Ann and I got together, because the woman lived over at Edgerton. We discussed the case, found out how the dialysis machine worked, and decided what we should watch out for. We thought it best to see her daily, so Ann and I took turns on those visits. Eventually, after my visits were closed out, Ann continued seeing the woman for less acute monitoring."

Ms. Rother's supervisor, Linda Ahearn, interjects, "But the really big advantage for us in joining forces with Ann is that she has a more direct line to the hospital and the physicians. With her help, we can really get things done—and a lot faster."

Ann Thomas and her Clinic have, however, had their problems. "My patients tell me that, quite often, when I send a referral slip with them to their own physicians on some problem they've come to me with or a problem I've uncovered, the physician doesn't even look at it. And

I've had private physicians totally ignore what I felt was a potential emergency situation.

"Also, the resident physicians," she says, "sometimes feel uncertain. This doesn't bother me, and I don't push my point of view with them. I feel if something is important, I'll go to the staff physician. Anyway, most of the time I feel they're threatened because they're new and don't know me—because I'm just not a threatening person. What helps here is that other staff physicians besides Doctor Derro and Doctor Hunt are very supportive of me, and they make every effort to communicate their support to the residents. So, generally, the residents get over their ambivalent feelings very quickly."

The Clinic's biggest problem—and one that remains unsolved—is the funding of Ms. Thomas' position. Blue Cross, Medicare, and other third-party payers will honor the charges of Doctor Derro and Doctor LaMotta, but refuse to consider those for Ann's services. Considering that St. Paul-Ramsey's agreement with HRA states that care at Hi-Rise must be provided at very low patient cost, this places the hospital in somewhat of a dilemma. Obviously, the patients can't foot the bill. The initial solution was to obtain an NIH grant to cover Ann Thomas' salary. But now that grant money is almost gone.

Mulling over this continuing dilemma threatening the viability of Hi-Rise Clinic, Doctor Hunt says, "When we began, we went into the clinic idea with a sense of mission, without really taking the time to consider how to support it. And I must admit, I've rather given up on trying to figure that out. Now, I feel we'll just have to show that the Clinic *does* work, that it's very valuable, and that it's not very expensive. Doing that, we'll just say to society, 'You help us figure out how we can continue to supply this.'

"Of course, we could operate under a kind of ruse, pretend that the physicians saw all the patients, and make a charge accordingly. But I'm against that. I think we have to set it up on firmer ground and on a different level."

If Hi-Rise Clinic is on shaky ground financially, it nevertheless exists on a firm bedrock of joint practice concepts and practices. Ms. Thomas says, "I think we have a joint practice here, if you define that as a practice in which the physician and nurse work together, cooperate in giving care, and respect and value each other's opinions and judgement."

Doctor Derro adds a significant point: "Ann is not my nurse, and I'm not her superior. She's an employee of the Family Practice Department —just as I am. Actually, the term *employee* disturbs me, because she is my colleague. I see our relationship as a professional one, not as employer-employee. So, I think I'd have to say we do have a joint practice

going here—at least for those patients we see for primary care."

One factor that corroborates their viewpoint is the amount of independence—or, as Ms. Thomas prefers, "interdependence"—that the nurse practitioner has in comparison to more traditionally placed nurses. She feels free to make suggestions to the physicians, or to point out what she feels are weak points in their charting.

This feeling of freedom to express herself also extends to drawing up POMR problem lists and treatment plans and to initiating, on her own, treatment of patients. "If I find a patient is hypertensive and not currently on medication," she explains, "I'd probably start that person on medication on my own, following the protocol Doctor Derro and I worked out."

Nevertheless, Ms. Thomas doesn't see any primary-care patients completely on her own. Doctor Derro feels that some of the skills she is learning take a long time to acquire and perfect, that it is not inconceivable that she might miss or misinterpret something in a history or on a physical exam. In addition, she feels more secure with physician backup.

"I don't believe a nurse practitioner should operate independently," she says. "I just can't see them hanging out a shingle on their own—if that's what some are doing."

Doctor Derro feels that the nurse best suited to becoming a nurse practitioner in a joint practice should have held a position carrying a great deal of responsibility. To those contemplating the incorporation of such a teammate in a practice, he suggests that the physician be sure that the personality of the nurse is suitable to the practice involved, that she have an open mind and the ability to take constructive criticism, and that she can deal with people. Also, the physician himself should have a clear idea of what the nurse will be doing, while keeping an open mind about what she can do. "Such a physician getting into a joint practice might just find out that the nurse practitioner can do a lot more than he ever thought," he says.

"I don't think joint practice is just a fad. It's an idea with a future—especially where there are populations medically under-served. The nurse practitioner can help balance the lopsided distribution of physicians.

"Where I'd like to see a change is in the reimbursement for the nurse practitioner's services. The nurse practitioner concept is valid and valuable. But third-party payers don't—or won't—recognize this. The way it is now, they won't pay unless a physician literally lays hands on the patient."

"That is a problem, both here at Hi-Rise, and in general," Ms. Thomas says. "And I also agree that there's a big future for joint practice. It's a way to meet many important needs—and some that the physician can't supply, either because they're physicians or lack the time. Also, it has

great advantages to a physician, who often gets so swamped with routine things he might let some of his skills slip. By delegating some responsibility to the nurse practitioner, the physician can focus on his real talents, maintain them, and continuously improve them. I think in time we'll see joint practices including other kinds of practitioners. Some clinics are already doing this. I don't think the nurse practitioner should just do the things a physician doesn't want to do—especially if they are a waste of *her* talents. We have our own unique contribution to make."

R.O.

THE ONLY WAY TO GO

North Conway, New Hampshire, located in a two-season resort area of the picturesque White Mountains, is a community of contrasts and paradoxes. Behind the dazzle of its nearby ski slopes, the sparkle of its crystalline mountain lakes and streams, and the glitter of expensive tourist shops and havens that annually attract thousands of visitors, are rural, backwoods homes where families exist near the poverty level. Indeed, its own Carroll County had, at one time, the lowest per capita income in a state that is near the bottom of the list, in terms of the earnings of its people.

Although most of North Conway's inhabitants are recent arrivals—having come there to retire, to escape the rat race, or to chase the elusive tourist dollars—there is still an old-fashioned, down-East feeling of fiercely independent conservatism everywhere. So, even though you might have trouble finding a true native in the shadow of nearby Mt. Washington, the newcomers still vote at annual town meetings and elections as if they were born near the imposing white-capped spectacle. Consequently, many of the newcomers add their voices to that of William Loeb, outspoken publisher of New Hampshire's most influential, and the nation's most ultraconservative, newspaper in denouncing a state income or sales tax, neither of which New Hampshire has. As one native observed, "They live poor, but they vote rich. So, the state has no tax base for helping its people."

It is as if many of those who have come to the community are caught in some kind of time warp, as if they were stalled midway in one of the nearby covered-bridge relics, with the nineteenth century just behind them and the twentieth still beckoning up ahead.

One of the least visible of the community's paradoxes is North Conway Pediatric Associates. Located in the basement of a small, one-story medical building, it looks, at first glance, like any other practice where patients span the infant-to-young-adult age groups. The busy waiting room is a jumble of worn toys and dog-eared magazines; mothers unwrap and cradle their newborns and toddlers sit anxiously or scramble on the floor. Just beyond, two secretaries answer an ever-ringing phone, check in patients as they arrive, go over the books, and disappear occasionally to the rear area, consisting of two consulting-examining offices, a special

examining room, and a small laboratory. The first impression, then, is that of a fairly typical pediatric practice, as commonplace as the ubiquitous "red ears" or bronchial wheezes of its pint-sized patients.

That impression, however, is wrong. The North Conway Pediatric Associates is not a group of physicians. It is Ellyn Jones, M.D. and Patricia Mulhearn, R.N., pediatric nurse practitioner.

Yet even if you are aware that this means that a physician and a nurse have joined forces in a joint practice, you may still have difficulty in deciding who is who. If you wait outside either one of their consulting-examining offices you will not see either one emerge in the physician's traditional laboratory coat or the nurse's starched white uniform. Moreover, you will notice that neither one is hopping around carrying out the orders of the other and that both women address each other by their first names—a custom many of even the smallest toddlers and mothers also follow. Ellyn and Pat are equals working as equals.

The team of Jones and Mulhearn is, itself, a study in contrasts. Ellyn, single, just entering middle age—and ten years older than her partner—is shorter, more compact, and moves with a quick deliberateness and economy that underscore a basically pragmatic approach to life. When she anwsers questions or makes statements, it is with the direct, almost clipped delivery of one who knows the value of time in an ever-growing practice. You get the feeling that it may be more difficult to get to know her, but that once you do, you will have a friend for life.

Pat, one the other hand, projects a more casual, lighthearted personality. Candid, quick to laugh or to get her Irish up, and eager to explore controversial issues, she soon seems like a person you have known all your life. But her amiable demeanor masks an earnest and concerned woman, just as Ellyn's apparent professional detachment hides an open, warmhearted one. And there is little doubt that, for both of them, their chief interest is the children they look after. As one mother put it, "They're distinct personalities, but ideally complementary."

The history of North Conway Pediatric Associates begins with Ellyn's solo private practice twelve years earlier, after she'd finished medical school at the Columbia University College of Physicians and Surgeons, her internship at Ohio State, and her residency at Babies Hospital—Columbia-Presbyterian Medical Center, in New York City. She'd known and loved the North Conway resort area most of her life, through vacations spent there at her parents' summer cottage. "North Conway had never had a pediatrician," she says. "So it was kind of exciting to start where they didn't know anything about pediatrics."

Once she was accepted by the community and her medical colleagues, the practice grew steadily and rapidly. In less than ten years, she was seeing 20 to 30 children a day, besides making hospital rounds, helping

found a private medical clinic for underprivileged children, and serving on the local school board and the board of directors of her church.

"I was too tired at the end of each day, had too many patients, and didn't have time to take care of them," she says. "I just wasn't doing as good a job as I could. Oh, the acute cases were being handled all right, I wasn't worried about that, but I did feel that much more could be done for general medical care.

"But I didn't think the area would support another pediatrician. Also, it seemed if I could find someone who was interested in doing the kinds of things that needed doing, especially the counseling kinds of things, that this would be a better deal than having another physician in. So I had to look for an alternative."

The idea of a nurse practitioner evolved slowly—from magazine articles, round-table seminars, discussions, and conferences. She thought that might be the answer to her needs. But she wasn't sure just how a nurse practitioner would fit into her practice, or what the nurse's role would be. That would have to wait until the right person appeared.

It was almost two years before Ellyn began to take a very close look at Pat Mulhearn, then the evening supervisor of nursing at North Conway's 30-bed Memorial Hospital. She watched and watched, fine-tuned her focus, and was impressed.

"Pat was someone I trusted," Ellyn says. "She not only did a good job, she seemed to care a lot about people. And she wasn't afraid to step on people's toes if she needed to get better patient care. Also crucial to me was the fact that she seemed very good with teenagers and young adults. This was what I was specifically looking for—someone to handle that end of my practice."

When Ellyn approached Pat Mulhearn with the idea of becoming a nurse practitioner and of eventually entering the Jones practice in some as-yet-undefined way, it was a particularly low period in the latter's professional life. Pat had gone to Faulkner Hospital School of Nursing in Jamaica Plains, Massachusetts, then went on for her bachelor of science in psychology at Newton College of the Sacred Heart, taught practical nursing at Holy Ghost Hospital in Cambridge, and had worked in a clinical research center at the Massachusetts Institute of Technology. What had prompted her to come to Memorial Hospital was a newspaper ad for "ski nurses," which had offered a three-month stint tending those who misjudged their ability to slalom on the surrounding slopes, but which had turned into a three-year stay for Pat, once she became enamored of the countryside.

"But," Pat says, "I was restless and disillusioned with nursing. I really wasn't doing what I wanted to do or was trained for. I was an evening supervisor carrying around keys, answering phones, keeping records, and

dispensing medicine. But that wasn't where nursing was for me.

"Of course, I was amazed when Ellyn approached me. I guess it was about the biggest compliment anyone ever paid me. Still, what I had my mind on was becoming a counselor—going back to school, getting a graduate degree, and setting out to counsel adolescents. As for being a nurse practitioner, I'd never seen one—but I certainly didn't want to be one of *those*."

Ellyn, however, once she had fixed her sights on Pat, was not to be dissuaded. She brought up the idea whenever the two met. Occasional chats turned into lengthy discussions over the autumn months, and the professional respect they held for each other developed into a close friendship. And, finally, Pat let herself be persuaded. By Christmas, she was writing to schools about getting a graduate degree in nursing.

"Counseling was what I wanted to do," Pat says. "But as we talked about what I could contribute to the practice, I began to realize that I could probably do more of that in a doctor's office than I could in a hospital. You see, I was interested in a kind of social-emotional objective as my contribution, and since Ellyn agreed with that, as well as helping her ease the load, it seemed like the thing to do."

One of the things that opened Pat's eyes to the potential of a physician-nurse partnership was a visit she and Ellyn made to the joint practice of one of Ellyn's physician friends and a nurse practitioner in Vermont.

"Even though I was now sort of planning to become a nurse practitioner, I had no clear idea of what they did," Pat admits. "So when I saw that nurse practitioner in Vermont, I was impressed. Why, she could see sick kids and actually say what was wrong. I remember asking her, 'Do you mean you see them alone?'

"It was all so foreign to what I'd been taught as a nurse. I didn't feel I could ever say what the condition of a patient was. Everything 'appeared'—you know, the patient *appears* to be bleeding, *appears* to be cyanotic, or *appears* to have stopped breathing. You couldn't say, 'The patient is dead.' A doctor had to say that."

There were, however, two things about that Vermont joint practice Pat and Ellyn didn't much like. The first was that the Vermont physician and nurse made different charges for their services. "I got the message on that," Pat explains. "It was as if the nurse was giving second-rate or cheaper care. I didn't want that to be the case where Ellyn and I were concerned. Ellyn agreed and we decided our charges would be the same." The second, which became apparent later, was the method the joint practice used to schedule patients and assign tasks to either the physician or nurse. The physician always saw the newborns on their first visit; the nurse practitioner always saw them on the second, the doctor on the third, and so forth," Ellyn says. "We didn't want our prac-

tice to be run that rigidly."

"Also," Pat adds, "I was more an identity kind of person, viewing where I was going as far as my own professional identity was concerned. So I didn't want to think about tasks, because that was kind of secondary."

Another thing that helped Pat make her decision was her understanding of Ellyn. "I found she was very sensitive and humble, very humble," she says. "She's more interested in people than money or glory—a giver not a taker. When I knew her just professionally in the hospital, she was probably the first doctor you'd consider consulting, because she was available and she was nice. She didn't scream and yell when she got mad, and if you asked some dumb question, she'd answer it without getting upset. You know, people really look up to her, as insignificant as she sees herself, and they see her as a really big person. So do I."

Pat decided to do her training at Yale. The nurse practitioner course there was a two-year program, longer than at some other schools, but she felt the extra time would be well-spent.

Yale upset many of Pat's preconceived notions about nurses and nursing. And she, herself, began to change. "I was expecting all these women in stiff, starched uniforms and white hose," she says, "and here was the dean of the school going around in blue jeans on a bicycle!

"I didn't really realize what had happened to me until I was into my second year and started looking at the first-year students. They were all caught up on 'doctory-type' things, just as I'd been, like physical exams, finding out what 'red ear' really looks like, or what a 'funny chest' sounds like. In that first year, we were gaining the skills of a doctor, but in a way were losing our identity as nurses.

"But in the second year, we sort of got it all together. We went back and began again picking up the 'nursey' things. It was then that I developed real professional identity, began realizing what makes nurses different from doctors, and what nurses can do that doctors can't."

An important part of Pat's Yale training was related to sex counseling. She felt this extra training was necessary. "If you're dealing with adolescents, which I saw as one of the most important things I'd be doing in the practice, then you have to deal with sexuality. That's one of the goals of adolescents, to come to terms with sex. And also, though to a lesser extent, drugs. It was the most exciting period of my own life. I've had some of my most gratifying moments watching young people grow, getting in touch with who they are, finding out where they're going and why they're doing this or that. I really enjoy helping kids do that. They really need to have someone to talk to and help them sort it all out."

Pat spent the summer vacation after her first year at Yale in the office with Ellyn. It proved to be an important period, not only in terms of

accomplishments, but also as far as developing their roles and codifying the professional relationship that would eventually result in a joint practice team approach. Pat admits seeing patients gave her a "nervous feeling" at first. They retained Ellyn's single appointment book for scheduling patients. They saw some patients together, some separately. At first, Pat was rather slow and insecure when handling physical exams or sick children. But mothers were impressed with her thoroughness and probing and with the fact that she always called Ellyn in when there was the slightest doubt about a sick child's condition. "She didn't like to be in the office without my backup," Ellyn says. "Not even 20 minutes, not to mention two hours, which could happen if I was on call."

Gradually, however, Pat's confidence increased. Soon she *knew* what a "red ear" looked like in a youngster, without needing to have it confirmed by Ellyn. Her expertise in doing physicals increased so that she no longer took 90 minutes as she had with her first one. More important, she was talking, talking, talking to people, counseling young mothers, older mothers and adolescents, which was what she saw as her major contribution to the practice and what she felt she should be doing as a nurse practitioner.

With the growth of professional identity and through talks with Ellyn in the office, at lunch or almost anywhere after work, Pat also gradually came to realize that if she joined Ellyn's practice, it would have to be on another basis than the one they had originally envisioned. "That thought didn't come to me suddenly," Pat says. "It evolved as I grew into my role. At some point, I realized I couldn't just be an employee."

"I agreed with her completely on this," Ellyn says. "In fact, it made me quite happy when we talked it over, because I didn't want to be someone's boss. First of all, it's just more fun to have a colleague to work with. Second, I really didn't want to have to tell someone what to do every minute, or have the practice set up so that I told an employee, 'Now you can do just these things.' So, some kind of partnership seemed the sensible thing."

It was thus that the Jones-Mulhearn joint practice was formulated. Pat defines it as "two different professions, perhaps coming from different sides or areas, working together toward a common goal." Ellyn goes a bit further: "Joint practice for me is a team approach to practicing pediatrics, which has been a boon to my personal life. It's given me more time for outside things like studying and civic jobs. Also, it's just more enjoyable!"

Once the two women agreed on a partnership rather than an employer-employee basis for their practice, they began to work out the matter of finances, the distribution of profits.

"Even though we were going to charge the same amount for our

services, it obviously wouldn't be fair to Ellyn if I were to receive an equal salary. There was the fact that she'd had the practice for all those years, and there would be areas of patient care and treatment in which I wouldn't be involved, like her work at the hospital."

"What I wanted," Ellyn says, "was to be able to pay Pat at least as much as a teacher with a master's degree. Then we started kicking around the idea of a forty-sixty split. The funny thing is, when we got down to working out the actual figures, the two amounts in terms of what Pat would be paid came out to about the same figure—about $8,400 a year. Since then, Pat has brought more patients and more money into the practice, and her salary has been increased to $12,000 a year."

Pat's starting salary was a 40 percent increase over what she'd been earning as a night supervisor at Memorial Hospital. But adding her to the practice amounted to a 30 percent decrease for Ellyn. Obviously, Pat's appraisal of her future partner had been correct. Ellyn's comfortable ranch home and her little Volkswagon were all she needed in creature comforts. She wasn't in medicine for the money.

Another important thing accomplished over that first summer was a study on patient acceptance of Ellyn's and Pat's new team approach to pediatrics. This study, which formed the basis of Pat's master's thesis at Yale, and was titled "Mothers' Reactions to Well Child Care by a Pediatric Nurse Practitioner and Pediatrician Team," used two groups of patients to form the basis of the acceptance investigation. The first consisted of 26 children and their mothers who saw only Ellyn for three months. The second group saw both Ellyn and Pat.

"The results indicated that the majority preferred the team approach," Pat says. "Some were skeptical about seeing the nurse, but overall it showed I was accepted as a partner. The comments from those who'd seen only Ellyn were things like 'She really gave me a thorough exam,' 'She's wonderful with children,' 'She takes a real interest in her patients,' and 'She's friendly and is really concerned about the child.' Those on the team were somewhat different. Here we got responses like 'I was made to feel special,' 'I didn't feel rushed,' 'Time was taken to explain to me each step of the checkup,' and 'It was good to discuss various problems with the nurse.'

"The way I interpreted these responses was that with the team approach, the mothers felt more involved. Not that they were dissatisfied at all with just seeing a doctor, who was very good with children. It was just that they were glad to be included in the medical treatment of their children."

"There were very few unfavorable responses," Ellyn says. "Most of them had to do with time. But, of course, people generally don't like to

complain. Still, we felt there was an overwhelming acceptance of our plan."

"I never could quite figure the time thing out," Pat says. "Some of the objections were to time spent in the waiting room. Others, such as one made by a mother who saw only Ellyn, complained that the doctor seemed hurried, although she added this was understandable because she had a lot to do. And one woman who'd seen the team said it took too long."

Pat was graduated from Yale in May 1974. She returned to North Conway as a full-fledged member of the practice. A regular protocol was established. It provided that youngsters would see either Ellyn or Pat, depending on who was available, unless the mother specifically requested seeing the physician due to some emergency. Adolescents would be seen routinely by Pat, since they were her specialty. The corporation was set up in July, and became the first of its kind in the state of New Hampshire. Pat was made treasurer of the corporation. She found that she functioned well in this capacity. But it was helping patients that really interested her.

Counseling is perhaps her chief concern. She defines it as a "sensitivity to people and trying to figure out what they need done." This can take the form of instructing mothers on how to get children to take medicine, bed-wetting problems, assuaging parent guilt when their youngsters become ill, or even dispensing birth control information and methods to teenagers.

Her confidence has grown with experience. "I referred a kid to a busy doctor," she says. "I made one appointment, and it was canceled. I made another, and that was canceled, too. Well! I just had a fit. So I called the doctor and said, 'Look, if you don't have time to see this patient, I'll see that she gets care somewhere else.' And you know? He was out here in eight minutes flat. Now that's something I never would have had the courage to do a year ago."

The team approach has drastically changed the practice. "Those kids that we once didn't know what to do with, who we threw up our hands over and referred to someone else, we are now handling," Ellyn says. "Also, since Pat's been here, we're doing pelvics and pap smears in the office. And, oh, yes, another thing we've started working on by way of Pat's counseling is getting down to the real reasons some mothers bring their kids to the office in the first place. Some of them come in and the kid really isn't all that sick. In other words, the mother is there because her husband has been giving her a hard time, one of her parents is ill, or some other reason. Sometimes by just talking, we can get to the bottom of this."

"Actually," Pat says, "you might say I'm doing more 'doctory' things now, while Ellyn is acting in a more 'nursey' way."

Members of the local medical community are enthusiastic about the joint practice. William G. Duprey, Jr., M.D., a general surgeon, is one of these. "Ellyn is a lot happier now," he says. "She was driven too much before and it was kind of getting to her. As for Pat, she's obviously getting more satisfaction from her job. And as time goes by, she's becoming more confident. As far as the joint practice is concerned, they've been able to handle a lot more patients with greater ease."

Don Orsillo, a psychologist at the nearby Carroll County Mental Health Service, which both Ellyn and Pat use for referral, says: "It's much easier working with the team, and I feel much more comfortable making a referral to them. The reason is that I know a good physician will see someone and that the person will then be followed very closely by a good solid person, such as Pat, who can pick up the emotional side of a pediatric practice."

Referral being a two-way thing between the joint practice and Carroll County Mental Health Service, Doctor Orsillo comments on some of the problems this poses for Ellyn and Pat. "Although our relationship has increased significantly since they started the joint practice, they still have difficulties with us in terms of follow-up. If you send a person to a private practitioner, the chances of follow-up are much better than if you send them to a 20-member staff at a clinic like ours, where you're not sure what they get. So that's what we're working on."

Doctor Duprey adds: "Pat seems to know her limitations and doesn't overstep her bounds. She's come to me for consultation on various cases, and I've always been impressed with the way she's sized things up."

Most patients also approve of the practice. Pat Surette, a mother of five, admits that she at first had some misgivings about how it would work. "I was fearful that I might not like making an appointment with Doctor Jones and then getting to the office and being seen by a nurse," she says. "But that hasn't been a problem at all. Miss Mulhearn is so capable. And if there is something that needs a prescription, she will always call in Doctor Jones anyway to confirm what she suspects.

"Also, with the annual physicals, which Miss Mulhearn did the bulk of this year, she was able to give more time with questions about how the children were getting along in areas outside of strict medicine. We had time to talk over a few minor problems that, perhaps, in the past I might not have brought up. So, all in all, it's been more . . . pleasant, more . . . satisfying, than I anticipated it would be."

Lee Drowne, whose four allergy-prone children Ellyn jokingly calls "The Wheezers," says the big change is that Pat now does most of the physicals and administers her children's monthly allergy shots. She also sees the advantages in the practice's new, more leisurely pace for check-ups. "You can learn a lot from a child just sitting and talking to him or

her," she says. "That's what Pat is doing now."

A teenage girl also approves of Pat. "When I first came in, it was just for a physical," she says. "But as Miss Mulhearn went through it, she somehow discovered this problem I was having. It was just as if she knew something was bothering me without me saying anything. It was scary, sort of.

"Now I come in whenever something is bothering me. We just talk about different things that have been happening to me—family life, or outdoor life, or school. Then, sometimes, we just have conversations about what both of us have been doing. You know, just like two women always do when they get together to talk."

Much of Pat's counseling is sex counseling. Sex counseling is generally done after consultation with parents. "We find out 'where the kids is at' in terms of what he or she knows, then ask the mother if we should go on from that point," Pat says. With parental approval, the counseling can take the form of advising kids on physiological changes in their bodies, letting girls know that they have the right to say "No," or clearing up misconceptions about various aspects of sex.

Most of this counseling concerns birth control. Pat explains the various means available, what the advantages or disadvantages are of each, and how some of them can affect a girl's body. Ellyn and Pat don't dispense diaphragms or IUDs, because they haven't had the necessary training, but they will prescribe "the Pill."

Pat takes a pragmatic view of her adolescents. "They've already made up their mind whether or not to have sex. Most of them won't tell their parents. So we feel it's better for them to be on the Pill than to perhaps have to go through an abortion. An abortion can have complicated effects —far more than the Pill.

Ellyn and Pat believe that their joint practice will adapt to the needs of the community. "People change all the time," Pat observes. "So I suppose our practice will, too. That's the big thing about us, nothing is ever definite, we're just so relaxed. And the lines of communication are always open, so I don't think there'll be any problem when the time does come to change."

They also believe in the principle of joint practice. "I think we'll be seeing a lot more of it in the future," Ellyn says. "It allows physicians and nurses to do the things they can each do well. In addition, it helps solve the doctor shortage problem—I don't expect there will ever be enough to go around. If we could have every doctor working with a nurse practitioner in joint practice, perhaps we won't need all that many doctors."

"As far as I'm concerned," Pat adds, "nursing will just die if it doesn't become involved in something like joint practice. I feel that nurses can't really do the things they're capable of in hospitals and regular practices.

If they're employed by someone, that person will always be the controlling arm and they won't develop their identity or realize their capabilities. Now, joint practice offers those kinds of opportunities. In fact, for both the physician and nurse practitioner it's the only way to go."

R.O.

THERE GOES THE BABY LADY

The girl is young and sullenly attractive, and she wears eyeglasses the size of saucers. Her name is Nanci, spelled with an "i" instead of a "y". She brushes her long hair back from her forehead. She says sharply: "I've got a couple of questions." From her tone, they will not be questions, but demands.

Irene L. Nielsen, C.N.M., sitting behind her desk in the little consultation room, smiles at her belligerent patient. Ms. Nielsen wears a pale blue medical jacket over a black sweater and pink slacks. She has short brown hair and gold, wire-rimmed glasses. As the diplomas on the wall of the room indicate, she is not a physician, but rather a certified nurse-midwife, who works (with a C.N.M. colleague named Francis Richart) as a member of a private obstetrical joint practice in Eugene, Oregon, with two physicians—Donald F. Woomer and Robert B. Jacobson.

"Yes?" she says to the girl.

"I am uncomfortable about having my baby in a hospital," the girl says. "I don't like the idea of having a lot of strangers around me at such a personal moment. Do I have any other choices?"

Ms. Nielsen mentions a counterculture birth clinic, called White Bird, where a physician sometimes does home deliveries. But Nanci impatiently shakes her head. The physician there is leaving in June, which is before her due date. The reason she is here, she says, is because she has heard that Doctor Woomer works with several nurse-midwives. Can she have her baby delivered at home? Ms. Nielsen says no. Nanci hesitates, then says she will proceed with plans to have her child in a hospital—"for the time being."

Ms. Nielsen begins to describe how the joint practice team provides birth care. "We are interested in having you receive the best care to fit your needs and to ensure the safety of your baby," she says. "We are in a position in which we can greatly adapt what you probably expect from a hospital delivery. Your husband can be with you all during the birth process and in the recovery room afterwards. You won't be given excessive drugs. The baby won't be wheeled away right after birth, so your family unit can stay together and get acquainted. You can go home four hous after birth. Were you aware you had these choices?"

"No," the girl says. "I didn't know that." She starts to relax, some of

her hostility dissipating. She begins to discuss her pregnancy with Ms. Nielsen. The pregnancy was unplanned, but she and her husband were beginning to "feel good about it." However, she says, they are still uncomfortable about the impersonal care they assume she will receive in the hospital.

"I'll put a note here in your record," Ms. Nielsen says, beginning to write in the patient's folder, "that you want a homey atmosphere and involvement. I'd really like to provide that, and I think you're going to be surprised."

The patients who come to Doctor Woomer's obstetrical office on the edge of the University of Oregon campus are for the most part young, bright, and well educated. They appear at the maternity service presenting lists of "demands," which Doctor Woomer and his three associates diplomatically refer to as "wants." Many of their patients have read the controversial book by Frederick Leboyer, M.D., *Birth Without Violence*, in which the French physician criticizes the way in which maternity care is delivered. Doctor Leboyer recommends well heated and dimly lit delivery rooms and warm baths for the babies immediately after birth.

When Nanci leaves, Ms. Nielsen receive another patient.

Her name is Betty and she is dressed in jeans and a flower-print maternity smock. With her is her husband Fred. He is wearing bib overalls and a green plaid lumberman's cap, which he has not removed. A bushy beard obscures his mouth.

His wife does the talking. She says they have read Leboyer and want the delivery room dark. Ms. Nielsen writes on the record: *Lights dimmed.* "And we'd like to have the doctor do the massage and the bath," she adds. "O.K.," says Ms. Nielsen, but does not write anything. "Think about some alternative ideas. Certainly, the gentleness Leboyer suggests is something that midwifery has been advocating for a long time, but instead of having *us* doing the massage, or having *us* take the baby away from you for a bath we prefer leaving the baby with the mother and father. Suppose we give the baby to you, skin to skin, instead of taking it immediately to a warm bath. You can get acquainted with the baby that way."

"What do you think?" Betty asks Fred.

"It's up to you," he says.

"I'll think about it," she says.

"The bath itself is not that important," Ms. Nielsen says. "We can do it, but I think it's more traumatic to the baby than being next to the mother. Skin to skin warmth, and then later, maybe, you can bathe the baby."

Fred perks up: "Leboyer recommends that, right?"

They continue to plan for the delivery. Ms. Nielsen writes rapidly on the record: "Let's see if I have this all down: Lights dim, skin to skin

contact, parents to bathe child, and maximum comfort and safety, with minimum drugs—"

"How about the talking," Betty asks. "There's not a lot of loud talking in the delivery room, is there?"

"Not usually, but let me put it down: 'Quiet environment.' Let's see, you've seen Fran, the other nurse midwife, and Doctor Woomer, but you haven't met Doctor Jacobson. When you come in for your next appointment in two weeks, we'll schedule you to be examined by him."

The questions asked by Nanci and Betty are typical of those posed by patients who come for maternal care from Doctor Woomer and Doctor Jacobson and the nurse-midwives, Nielsen and Richart. Obstetrics and gynecology, as practiced by these two physicians, is a specialty, but it is also *specialized* in the way that individual attention is given to patients, particularly by the two nurse-midwives.

The patients who appear for care at this joint practice believe that the consumer should be heard, not only in the area of buying cars or appliances, but also in buying maternal care. They have begun to question the traditional American way of birth, which has included over-intervention in the form of excessive drugs, overindulgence in forceps, and excessive reliance on machines. Ms. Nielsen calls it "technology worship." She believes that "childbirth is a normal process, but American medicine has long taken the position that it can be dangerous to have a child unless you have the right equipment and the right experts who know how to read the equipment. We need to bring human values back into maternal care. It's just as bad medicine to take the baby away from the mother at birth and forget normal maternal attachments as it is to fail to listen to the heart tone on a fetal monitor."

Many younger people in the Eugene community have reacted to the impersonality of traditional delivery procedures, and have begun delivering babies on their own, at home, without the services of a doctor. Ms. Nielsen has had considerable contact with the young, so-called "counter-culture" population. She suggests that as many as 16 percent of births in and around Eugene may be done at home, without medical assistance. Doctor Woomer and Fran Richart believe the ratio to be nowhere near that high, but admit that home deliveries are a threat to the ability of the medical profession to deliver adequate health care.

"Eugene may be more advanced in its thinking than the average community," Ms. Nielsen says. "But it's only a matter of time before the obstetrical revolution spreads to the rest of America."

"Babies will survive if we don't interfere too much," Doctor Woomer says. "We have gone from an era of inadequate medical knowledge to over-intervention. We are now fighting over-intervention in many forms. There has to be a happy medium somewhere between do-it-yourself

delivery kits and the super-specialist. Nurse-midwifery is my idea of a happy medium."

Donald F. Woomer came to Eugene in 1968, after having practiced obstetrics and gynecology in Saginaw, Michigan for a half a dozen years. As a newcomer to the community and to Sacred Heart Hospital, Doctor Woomer was able to react to problems that the regular medical staff had been overlooking. "The first day I walked down the hallway, I thought to myself, 'I'll bet they don't have any preparation for parenthood classes.' I could tell, because of the way the patients were screaming. Within two months I had a class organized."

It was like knocking over the first domino. The fathers who attended those classes soon began to demand admittance to the delivery room. Several members of the staff vigorously opposed this intrusion in their routine. Even so, the next domino fell.

Doctor Woomer became aware that the parent education program, while adequate, was geared to the varying styles of 23 physicians. Some doctors did spinals; others did not. Some used paracervical blocks; others did not. "Any course designed for the patients of a large number of physicians has got to be ambiguous," Doctor Woomer says. "I saw a need for special education in my practice. Somebody needed to talk to patients about such discomforts as lower back pain and ligament strains and about what to do in case of excess vaginal discharge. I didn't have time, but I was willing to hire someone else to do it."

At the same time, as a member of a solo practice, Doctor Woomer was unhappy with the way in which health care was being delivered by many obstetricians. Obstetricians would often induce labor so that the baby could be born at a time convenient for the doctor. Doctor Woomer found himself doing much the same in his practice. Sometimes, he would return home from the weekend to find that a patient had been delivered during his absence by a physician unknown to the parents, who were very unhappy with the experience. "I began to wonder if there was some better way to handle my practice. It was about this time that I spotted an article on midwifery in one of the journals."

Doctor Woomer had been exposed to the practice of midwifery while working as a flight surgeon in the Army in 1958. He had been invited to England for a two-week post graduate course. Several of the English obstetricians began to tease him about the fact that American doctors delivered all the babies, rather than relying on midwives. "You Americans have it all backwards," one Englishman said. "We deliver a few babies, but only the ones the midwives can't deliver. It's a challenge to handle the risk cases. That's fun. The rest we don't have to get up in the middle of the night for."

Midwifery is an ancient art that dates back to Biblical times, when one

individual in the community took the responsibility for assisting women in childbirth. Historically, that individual was always a woman. The term midwife literally means: "With women."

In the late nineteenth century, maternity care was modified. Male physicians began to realize that, considering the advances in medicine, the care given mothers in childbirth by midwives no longer was adequate to prevent infections. Europe and the United States chose different approaches for modifying maternity care. In Europe, the medical profession elevated the role of the midwife by providing her with additional education and training, so she could continue her time-honored profession in a more scientific manner. In the United States, however, midwifery was legislated out of existence in many states through stringent licensing requirements or as a result of out-right banning. So-called "granny midwives" survived only in pockets of the rural South.

The infant mortality rate improved, as mothers now gave birth in hospitals, attended by obstetrical specialists, instead of at home, attended by midwives or family doctors. The specialized skills of obstetricians working with scientific and sterile equipment in the hospital made the birth process less risky, especially when complications developed. At the same time, having a baby became a less satisfying experience for the mother, as well as for the entire family.

While in terms of personal relationships, the American system had flaws, the European midwifery system was medically unsatisfactory. In Europe, a woman might be seen by one midwife during pregnancy, another during childbirth, and a third afterwards. "There was no continuity of care," Carmela Cavero, a past president of the American College of Nurse-Midwives, has noted. "There are times when the skills of an obstetrical specialist, operating with all the latest scientific equipment at his fingertips, are necessary to ensure the health of mother and child. Ideal maternal care should combine the better points of the European system with the better points of the American system and come up with a means of delivering babies that would be both scientific and personal."

The first school of nurse-midwifery opened in the United States in 1931. Today extensive—post R.N. and master's level—nurse-midwifery training programs have been established at such schools as Yale University School of Nursing, the University of Illinois at the Medical Center, the University of Mississippi, Columbia University, and the University of Utah.

Women graduated from such programs refer to themselves as nurse-midwives, not just midwives, and they are far different from the granny midwives who work without benefit of formal education. In addition to receiving training in an organized program of study and clinical experi-

ence in the area of management of care of mothers and babies throughout the maternity cycle, these registered nurses must pass a national examination given by the American College of Nurse-Midwives, before they may use the term "certified nurse-midwife." A certified nurse-midwife does not consider herself an independent practitioner. The nurse-midwife is qualified to practice throughout the United States, but there are now a wide variety of legal arrangements regarding the license to practice nurse-midwifery, as determined by local or state licensing authorities.

Sometimes, after a middle-of-the-night delivery, Doctor Woomer would return home, restlessly toss and turn in bed, and think about hiring a nurse-midwife to help him in his practice. "The more I thought about it, the more it made sense," he says. "It could increase my productivity, improve the quality of care I could offer, and make life much more comfortable."

He began amassing information and statistics on nurse-midwifery. While doing so, however, he made certain his plans were cleared with the eight other obstetricians who were fellow staff members at Sacred Heart Hospital. "I asked for a show of hands one day," he recalls. "What I needed was some indication of whether anyone would resist my move to get a nurse-midwife. I kept them posted and I also confided in the head nurse in obstetrics. At the staff meeting in which we took the final vote on whether the hospital would accept a nurse-midwife, the head nurse was present. When she stated her interest in adding someone who could carry out the patient's requests, it was very difficult for the others to says no. Only two voted against it."

Doctor Woomer, meanwhile, had been negotiating with Irene Nielsen, who had just completed a degree in nurse-midwifery at the University of Utah. Ms. Nielsen was born in North Platte, Nebraska, and raised in Dallas, but she obtained a nursing degree, in 1961, at Gustavus Adolphus College in Minnesota. She then entered the Army Nurse Corps, serving at Fort Campbell, Kentucky and in Landstuhl, Germany, where she married a serviceman. Although Kentucky, with its Frontier Nursing Service, was one of the few areas in America with an organized nurse-midwifery program and although midwives did most of the baby deliveries in Germany, Ms. Nielsen had little contact with the profession at this time. She returned to the States to work in Oklahoma, first in family planning, then at a college health service, where she continued her interest in the care of mothers and newborns.

When her first marriage ended, Ms. Neilsen had four children, one of them only six weeks old. But she did not allow the situation to keep her from seeking a new career. "So many woman feel trapped because they have children and do not pursue their own careers," she says

"I decided to become a nurse-midwife." She enrolled in graduate school at the University of Utah, aided by the G.I. Bill and a stipend from the DHEW Children's Bureau traineeship program. She remarried, and now says that the encouragement she received from her children and her new husband was extremely helpful in achieving her goals.

Doctor Woomer, meanwhile, was searching for a nurse-midwife to join him in practice. He contacted the University of Utah and was put in touch with Ms. Nielsen. At first, she could not join his practice, because she had committed herself to a teaching job at Idaho State University. When, at the end of a year, Doctor Woomer still had not hired anyone, she decided to move with her family to Eugene. Despite her training as a nurse-midwife, she had not practiced as one in either Utah or Idaho, and she had delivered only 22 babies. In her first two years in Eugene, she delivered more than 700 babies before she stopped counting.

Despite the groundwork laid by Doctor Woomer in staff meetings, acceptance of the concept did not come easily. Several persons in the medical community thought the nurse-midwife experiment would not last, mainly because the patients would not accept what they assumed was "inferior care." The nurses in the obstetrical ward were excited at first about the arrival of "one of their kind"—a registered nurse who had been permitted expanded responsibilities. However, after the first week, the nurses realized that the "new girl in town" was infringing on some of their own responsibilities.

One of those prerogatives was the right to administer routine medications to patients. "I did not think somebody automatically needed a shot of Demerol, just because it said so on some chart or sheet," Ms. Nielsen says. "I said I would come in and make that evaluation. This put me in direct confrontation with the assistant head nurse."

A subtle reversal began to take place in the attitudes of the other obstetricians—even those who initially vigorously fought having husbands in the delivery room. Doctor Woomer claims: "Several of them found they enjoyed having the husband there as an audience of one. They discovered they liked explaining to him what they were doing and using him as an aid in calming their patient. There's a little ham in all of us, I guess. I notice now a significant decrease in manipulative obstetrics, particularly routine spinals and forceps deliveries. As a result, I think we're all practicing better medicine."

There were other benefits. During his first year of joint practice with a nurse-midwife, Doctor Woomer was able to increase his gross billings by 80 percent, which resulted in a net increase in his own income of $20,000. After adding a second obstetrician and a second nurse-midwife, his practice nearly doubled in size. According to professional litera-

ture Doctor Woomer has read, an 80 percent gross billing increase i fairly typical for a physician adding a nurse-midwife to his practice.

At the same time, Doctor Woomer believes the risk of practicing medicine, the threat of malpractice suits, has diminished. He states tha his malpractice insurance rates have not increased because he added nurse-midwives to his practice. "One of the real reasons why malprac tice is such a huge problem in the United States is that people are dis pleased with the interpersonal relationship between themselves and the physician," Doctor Woomer says. He believes that 95 percent of mal practice suits evolve out of a personality conflict between physician and patient.

When Doctor Woomer was practicing alone, he received a few cards or letters, and an occasional baby picture at Christmas—usually from some family he had helped with an infertility problem. Now, he has to face the phenomenon of daily cards, letters, roses, little vases, cases o wine, homemade almond loaves, and cookies dropped off for the entire office staff. Patients found themselves able to relate to an entire team not just one doctor. "The fan mail has got to fill a barrel," he says "Probably one of the most satisfying aspects of what we are doing is the way in which patients express *their* satisfaction."

Yet not all patients responded enthusiastically when they learned a nurse-midwife would become involved in their deliveries. Some patients transferred to other doctors. One woman refused midwifery involvement in her pregnancy, but when it came time for delivery Doctor Woomer found himself busy and Ms. Nielsen had to supervise her labor He arrived in time to (as he says) "catch the baby." Afterwards, the woman stopped by the office to apologize for her attitude.

Now, when patients ask to be delivered by a physician rather than by a nurse-midwife, Doctor Woomer and Doctor Jacobson suggest they change physicians. "We don't feel we should have to apologize for what we consider superior care."

A few obstetricians in town remain hostile to the concept of nurse midwifery. One day a clipping appeared on the hospital bulletin board describing how a nurse-midwifery program in Portland failed because physicians did not support it. Someone had written "Good!" next to the article. But Doctor Woomer notes with some satisfaction that several other obstetricians say they have begun to consider adding nurse-mid wives to their staff. "Those who are not willing to bend to the new idea are simply getting out of obstetrics," he says.

During pregnancy, an expectant mother will be seen four times by the physicians, generally twice by Doctor Woomer and twice by Doctor Jacobson. She will also get to know both nurse-midwives. "It's a cross over mechanism," explains Doctor Woomer. "We're a team of four, and

the patients relate pretty well to all four of us by the time they are ready to deliver."

A patient arriving at the office for her first visit sees the nurse-midwives. In addition to being given tests, the patient is given an explanation of how the obstetrical team will function during her pregnancy. On her second visit (usually at about 11 or 12 weeks), she meets one of the physicians, who reviews the laboratory work. The patient returns every four weeks for further visits with the nurse-midwife and sees the physician again only on the twenty-eighth week, an important time period, clinically speaking, because it is the period of maximum strain on the heart. "If we don't pick up any abnormalities the first time we may discover them here," Doctor Jacobson says.

When a patient begins to feel the first stir of life, she will begin attending classes in the evening. "We choose this time because it is when mothers are really convinced they are pregnant, so they are more motivated to attend classes," says Ms. Nielsen. If the patient has been seeing one nurse-midwife in the office, she may be asked to attend classes conducted by the other nurse-midwife. The first class is preparation for pregnancy, which is followed by three classes (closer to due date) on basic-comfort exercises and relaxation and on how the delivery will be made. The fifth and final class centers on breast-feeding. There is also at that time a discussion of contraceptive choices. Normally, the classes are held two nights a week in the office waiting room with Ms. Richart teaching one night and Ms. Nielsen the other.

Certain patients may be seen almost exclusively by the physicians. These are patients having so-called "high-risk" pregnancies, in which deviations from the normal are expected. One of the keys in the proper utilization of nurse-midwives in an obstetrical practice is to determine at what point the physician takes over management of the patient. Doctor Woomer says: "A physician who is going to employ *any* nurse practitioner has to have a very good definition in his own mind of what constitutes deviation from normal."

Deviations from normal that will complicate pregnancy may have existed previously and can be determined by history taking, review of previous health care cards, physical examinations, or laboratory tests. Some deviations from normal may be recognized only immediately prior to, or during, labor and they will require the closest cooperation and the immediate availability of the obstetrician.

According to Doctor Woomer: "We cannot always call the shots on normality early in the pregnancy. A patient's abnormality may not develop until seven centimeters of dilation in labor, at which point we may realize that she has not moved in two hours. That signals a potential problem. Any forceps delivery is handled by Doctor Jacobson or my-

self. I don't think a nurse-midwife would be dangerous using forceps, but that is where we draw the line. She chould be taught, however, to do everything I do."

Doctor Woomer estimates that seven to eight percent of his patients have Caesarean sections. He believes this is fairly typical for most obstetrical practices in the United States. Only four to five percent of his patients require forceps deliveries, however, while his conservative estimate is that at least 50 percent of deliveries made by obstetrical specialists generally involve forceps.

In most instances, Doctor Woomer appears in the delivery room only to offer congratulations. "We're functioning in an ideal role," he says, "seeing problems rather than day-in-day-out normality. Physicians really are trained to seek out and treat disease. Labor and delivery is a normal physiological phenomenon that only needs doctor treatment when it deviates from normal."

"We try to treat everybody the same, as far as our service goes," Doctor Jacobson adds, "and then try to individualize to fit what they would like to see happen."

"We try to establish a relationship of trust with patients," Ms. Nielsen says. "As far as what happens during delivery is concerned, they can do anything they want as long as it's safe."

When one father wanted to deliver the baby himself, Ms. Nielsen did not say no. She suggested instead, that he might be of more assistance by being at the head of the delivery table helping to counsel his wife during her labor. The husband agreed, admitting: "I guess I just wanted to do it as a buzz."

Members of the team continue to discourage patients who want to have their child delivered at home, or who want to do the home delivery themselves. "I don't think it's my job to teach the practice of midwifery to patients," says Doctor Woomer. "We feel the hospital is the safest place to have a baby, but we try to make the hospital as comfortable as the patient wants it to be."

Ms. Richart adds: "I've seen a lot of babies born with problems and I'm a strong believer that the hospital is the place to have babies. At the same time I'm aware of the inhumanness of many hospitals and of why people want to experience childbirth at home. My role as midwife in a community like this is to help the hospital seek change, help develop an attitude of change, and plan for that change. In fact, I am doing just that."

Fran Richart and Irene Nielsen alternate on call in the office. Irene will appear at the office for patient visits in the afternoon, return the next morning for the same, then go on call for 24 hours. While Ms. Nielsen is on call, Ms. Richart appears at the office (afternoon, then

morning), so even though one nurse-midwife is seeing patients, one is available at all times to go to the hospital. The two alternate weekends on call, so each has every other weekend free. Ms. Richart estimates that, with this schedule, they average about 50 hours of work each week. The physicians operate on a somewhat different schedule, which provides them with a day off midweek.

Both nurse-midwives have a new lifestyle. It involves living with the pager, the small, purse-size electronic radio that beeps when they have a call. Either can be at a party, or in church, but when she hears, by pager, that one of the patients has arrived at the hospital in labor, she follows immediately. It is a lifestyle that many physicians have become accustomed to, but it is a new experience for a nurse. "I haven't found it difficult," Ms. Richart says. "I like to sleep, but when I get a call that a patient whom I have met and developed a strong relationship with is ready, I'm happy to get up."

Ms. Nielsen was in church one Sunday when, just as the pastor mounted the pulpit to begin his sermon, her pager started buzzing. She opened her purse to listen to the message. The buzzing grew even louder. Everyone in the congregation turned and stared. When she left her seat and hurried up the aisle, the pastor smiled and said: "There goes the Baby Lady."

The morning after her talks with Nanci and Betty and her husband, Ms. Nielsen receives a telephone call at home, waking her from sleep, to tell her that a young couple, Brad and Lillian were now in the labor room. The parents-to-be had arrived at the hospital at 6:15 a.m. Contractions were now coming every five minutes and lasting 40 seconds.

Ms. Nielsen had seen the couple at the office the previous afternoon and had discussed with them the possibility of rupturing the mother's membranes because contractions had begun. Ms. Nielsen had advised against it and sent the couple home for a night's sleep. As she arrives on the maternity floor she says: "If we had ruptured the membranes yesterday afternoon, we would have been up all night fiddling around with her and using different monitors. This is what I mean by interference."

By 6:45 a.m., she appears at the bedside of the prospective mother who, though panting hard in the middle of a contraction, seemed to be comfortable. Ms. Nielsen examines the girl, finding that her cervix is dilated five centimeters. She assures her that the labor is proceeding normally, and says: "Unless you slow down or stop, we won't interfere with natural progress."

Ms. Nielsen leaves the room and returns with a Doppler device, which is a form of electronic stethoscope for listening to a baby's heart tones. The Doppler has two sets of earpieces, so, while Ms. Nielsen listens, Lillian listens, too. "Do you want to hear?," Ms. Nielsen asks Brad.

"O.K.," Brad says, "but I guess I'll be *seeing* it soon enough." He listens, and a smile crosses his face. "Yes sir, there it is. Sounds like an old Model T."

"The pulse rate is 160," Ms. Nielsen reports. "If I were to make a guess, I would say it's a girl." Ms. Nielsen explains to the father that girls may have higher pulse rates than boys but warns that this is an unreliable means of predicting sex.

Brad tells how, when their last child was born, the pulse rate had been 134 and everyone said it would be a boy. It was a girl. This time, Brad is prepared for either eventuality. The child will be Molly if a girl, Gabriel if a boy.

Ms. Nielsen asks Lillian if she wants some ice, but Lillian says no. Ms. Nielsen then asks if she wants some medication to settle a queasy stomach, but Lillian shakes her head again. "During the birth of my first child, they gave me something and it put me out," she says.

Shortly after 7:00 a.m., Doctor Jacobson appears, donning a white coat and smiling. "She's doing quite well with her contractions," Ms. Nielsen tells him. She listens to the heart beat again, which she says is now 148. The next time she examines the cervical dilation, the nurse-midwife announces that it is eight centimeters and says it will not be long.

The head nurse who has been standing near the doorway says: "I'll see if we've got a delivery room ready."

Ms. Nielsen goes to a dressing room to change into scrub clothes. Until a few years ago, everyone had to wear scrub clothes into the labor room, but that rule has been relaxed. Persons allowed into the delivery room wear gowns, masks, caps, and paper boots over their shoes.

When Ms. Nielsen returns to the labor room, Lillian is lying on one side, panting, with Brad rubbing her back. After the panting stopped, Lillian announces: "I have an urge to push."

"Hallelujah," Ms. Nielsen says, and indicates to the head nurse to clear a path to the delivery room.

By 7:45 a.m., floor nurses are placing Lillian's feet in stirrups and covering them with paper skirts. Brad holds his wife's hand. Although the delivery is proceeding normally, Doctor Jacobson comes into the delivery room and alternates between sitting on a stool, pacing, and talking to the nurses and to the mother. Ms. Nielsen says that, during any birth with Doctor Jacobson on duty, he tends to "hover." "He's in there mulling around all the time. Doctor Woomer is much more comfortable, and unless I call for help, he stays in the doctor's lounge reading, or making calls."

Doctor Jacobson admits he had some reservations about nurse-mid-

wives when he joined Doctor Woomer's practice after finishing his medical training a year-and-a-half before. And, apparently, he has not resolved them all. "I spent all those years learning to do deliveries and I almost hate to give it up. I enjoy taking care of people in labor."

Doctor Woomer, having delivered babies for 15 years, seems less reluctant to abdicate responsibility to another. He also feels working with a nurse-midwife has added a new awareness, on his part, to the needs of maternity patients.

The baby is almost ready now to be delivered. Ms. Nielsen instructs Lillian: "Take a breath as if you were about to go under water. If you fill your lungs up, it pushes on the diaphragm." She notes to Doctor Jacobson: "That's Marge's trick." (Marge is the head nurse.) "I've used that many times, and have found it very helpful."

The head of the child is visible now. Ms. Nielsen points out to the father that the baby's hair is blonde.

"Dishwater blonde," Brad says.

"Amniotic water blonde," suggests Ms. Nielsen.

One of the nurses announces that the child's pulse beat is 124. "It wants to be a boy," Ms. Nielsen says. And within a few minutes it is apparent to everybody in the delivery room that the baby will be named Gabriel, not Molly. "Now how did you do that, Gabriel?," Ms. Nielsen asks the newborn baby, while suctioning fluid out of its mouth. "Are you some kind of magician that you can change from a girl to a boy while we were waiting for you?"

Gabriel replies by uttering his first cry.

There are tears of joy in the mother's eyes. "Oh your grandma is going to be so glad that you're a boy. There hasn't been a boy in our family for so long."

The young father announces to nobody in particular: "This whole thing was very nice. I want to thank everybody."

During a delivery, despite Doctor Jacobson's presence, Ms. Nielsen is very much in charge. "I believe you can make decisions and still remain feminine," she says. "Nurse-midwives have had a reputation for being what they call 'aggressive'—until they dreamed up a new terminology. Now we're being called 'assertive.' Assertiveness is aggression with love."

She does not consider herself a feminist, despite having bought a book at the San Francisco airport entitled *The Women's Movement.* (It took her a year-and-a-half to read it.) "I am disturbed by a small minority of nurse-midwives who seem to be loudly antagonistic to the fact that we need men in our society. I hope to drown them out by saying there is a place for all of us, that we are different and yet equal. I suppose to some people that sounds like a women's lib statement, but it

doesn't to me.

"Nurse-midwifery is going to be accepted," she adds, "and it will result in changes in the American way of birth. But we have a long way to go before there are enough people in practice, and enough teams allowed to practice, to take care of normal deliveries."

Doctor Woomer also believes that the practice of midwifery, as a means of normal birth delivery, will continue to increase in the United States. "There are men's things that men do well together and women's things that women do well together," he explains. "I don't think a young boy's mother can teach him how to fly fish quite like dad can. The expanded role of nurses is great, and I feel it frees physicians to treat disease states, which is exactly what our training is geared for anyway. Nurse-midwives are managing normal labor, rather than merely assisting us. We are actually their consultants. We operate in joint practice.

"My advice to physicians interested in midwifery is that they, first, must be firmly convinced they want to do it. Then they have to be supportive of the nurse-midwife, and be very demanding in their expectations. Physicians cannot let them breech any of the sound principles of obstetrics. If a physician sticks to this and if he has a good educational background, he can develop a successful program."

Ms. Richart believes midwifery important because it provides care and support and education for a physiological process. She believes that the traditional obstetrician should not feel himself threatened by the nurse-midwife. "There are always going to be complications and problems, and the nurse-midwife will never be able to work independently because of them. The obstetrician is not out of date, but is freed to handle his practice, without having to spend all of his time and energy on what are actually normal, spontaneous deliveries."

Nevertheless, some time still must pass before the role of the nurse-midwife is fully understood by both the medical community and the child-bearing community. There was the morning that Ms. Nielsen saw Florence, an expectant mother, who brought her three-year-old daughter Eve into the examining room. Eve stood at the foot of the examining table. She looked worriedly from her mother to the woman in the blue coat. "Move over here while doctor checks me," Florence said, reaching out toward her child.

Ms. Nielsen smiled and said to Florence: "Eve says, 'Mommy, that's not a doctor. That's a nurse-midwife.' "

H.H.

DEATH IN THE FAMILY

Monday, April 7, 9:00 A.M.

From the quietly modern sixth floor offices of Robert Hartley, M.D., Neal Amsden, M.D., and Barbara Linden, R.N., the bay of Newport Beach, California shines in a hard morning light. It is an unseasonably cold day and the forecast is for intermittent "liquid sunshine" in surrounding Orange County. But as yet, there is no trace of either rain or of an onslaught of fog from Los Angeles, 40 miles to the north. It might, after all, be a good day.

The concern etched on Barbara Linden's square, matronly face has no relationship to the weather outside. Gazing out the window of her spotless pulmonary laboratory toward Hoag Memorial Presbyterian Hospital, shining white against the blue coastline a few miles distant, she is remembering how her association began with the two physicians who now employ her—an association that started at the hospital almost 12 years before. She is worrying now, because one of them—Doctor Hartley—seems to have suffered a coronary attack the night before. She is aware of the seriousness of the situation, both for her longtime associate and friend and for their two-year-old pulmonary practice. For if, in fact, he has survived a coronary, it will have been the third time he had done so since she has known him.

Yet, as she stands there in her nurse's uniform and white laboratory coat, you can almost see her bounce back to the immediate concerns of running the practice during this time of unusual circumstances and stress. A quick smile seems to say that there are patients to be seen, tests to be made, and support to be given to those in need. And in that smile there is not only a sense of underlying resiliency, but also an outpouring of basic zest and enthusiasm for her work. So when this self-described "big girl" of 50 years says, "Every day is so neat, I hate to look back," you immediately believe her.

Her "neat days" for the past two years have been involved with the relatively new and (for the area) innovative practice of her physician-employers. Located in a swank and ultramodern shopping-plaza-and-office-buildings complex, called Newport Center, that practice is actually divided into two distinct but often interlocking parts. First, there are the separate medical offices of Doctors Hartley and Amsden, where on

an afternoon-only, part-time basis they conduct examinations and consultations. Second, there is Ms. Linden's domain of pulmonary testing and therapy. Here, in a laboratory containing $19,000 in the latest pulmonary diagnostic and therapeutic equipment, she operates such devices as a radiometer, an arterial blood gas analyzer, and a Collins plethysmograph (body box) or gives patients instructions on home care and equipment use.

For the most part, those patients seen by the physicians in their separate practices are generally seen also by Ms. Linden, either for testing, instruction, or follow-up on a home-visit basis. However, not all patients seen by Ms. Linden are seen also by the physicians, since she handles many referrals for testing, therapy, or instruction from general practitioners in the area. In addition, people occasionally come to see her, not on the advice of their own physicians, but through hearing from other respiratory patients of her skill in teaching home-care therapy and equipment maintenance. These patients are also not likely to be seen by Doctors Hartley or Amsden, unless Ms. Linden discerns something medically significant when talking to them. Finally, when the physicians are not available she provides quasi-medical support, listening to patients over the phone, probing for significant information, and even ordering or changing prescriptions when she feels it is necessary, consulting with the physician on such changes. This regimen is carried out by her on a nine-to-five, Monday-through-Friday basis, during which time she handles, in one way or another, most of the 60 to 80 patients seen by members of the practice each week. Small wonder, then, that she has little time to look back!

But today, with Doctor Hartley perhaps gravely ill, is a special day for this career nurse who has spent more than a quarter century in her profession. Somehow, she can't help remembering how she got where she is at present. Beginning with her nurse's training at busy, 1700-bed Metropolitan Hospital Center in New York City (where she subsequently worked), she has acted as the only nurse in a 30-bed facility in rural Pennsylvania, a radical surgery nurse on the radical head and neck floor at a Youngstown, Ohio hospital, and the private nurse of a brain surgeon on a precursor to an intensive care unit in Bergen County, New Jersey's Englewood Hospital. Somehow, as the years went by, she also found time to marry, to care for a family, and to raise four daughters.

"I guess I just love my work," she explains. "Every time, I'd think I'll just do nursing on a part-time basis but I'd end up being pulled into a full-time position. The trouble with nursing is, of course, that when you're married with kids you feel a pull from two sides: On the one hand, there's your job and its importance to you; on the other, your family, which is also crucial."

It was again with the idea of doing only a bit of part-time nursing that she joined the staff at Hoag Memorial when her marketing-executive husband brought the family to southern California 14 years ago. She began in the emergency room, where once more her love of dealing with people and her "addiction" to work soon brought her to a full-time position.

It was here that she first became interested in pulmonary medicine, testing, and therapy. It was at Hoag also that she first met Doctor Hartley, about 13 years ago, and later Doctor Amsden, when he came in to assist Doctor Hartley on an irregular basis about five years later. Recalling those first years at Hoag's busy emergency room, she pinpoints when her first serious interest in respiratory care began.

"A boy was brought in pretty badly smashed up from an auto accident," she says. "He happened to be the brother of a nurse I knew. As we were working on him, the attending physician asked me if we didn't have a Bird machine in central supply. I rushed down, found it, and brought it back on a cart. But it was all in pieces and no one knew how to assemble it. Well, tragically, the boy died; and I couldn't help feeling if we'd had that machine the outcome might have been different. So you can be sure I learned as much as I could about the Bird from that moment on."

It was about this time that Ms. Linden met Doctor Hartley, who at the time was serving on a voluntary basis at Hoag, giving pulmonary function tests on a limited twice-a-month basis. Perhaps the intensity with which she sought information on the Bird machine and on other respiratory equipment sparked the pulmonary specialist's interest in her. Or, perhaps, someone else in the hospital noted this new concern on her part. In any case, when the hospital began thinking of setting up a respiratory care department, with Doctor Hartley as its head, they and the physician approached her with the idea of running it.

"At the time, I was woefully ignorant of the complexity of the field," Ms. Linden admits. "I thought we'd just hang up a couple of masks and we'd be in business.

"Then I started dipping into the literature—Comptom's *The Lung* was practically all there was at the time, which wasn't too easy reading. Well, I really panicked! I told the doctor, 'Look, I'm 38 years old, I have a husband, four kids, dogs, cats, and tropical fish. How can I possibly do it?' Well, he just looked at me very calmly and said, 'We'll do it together.' And that's how we started."

Armed with Doctor Hartley's support and confidence, she began to attend every symposium, seminar, conference, and lecture on respiratory care and therapy she could, from San Diego to San Francisco—a practice she continues to the present day. She also continued her reading, scan-

ning journals for the latest developments in research, equipment, and drugs. In addition, she spent two weeks training in the respiratory department of the Hospital of the Good Samaritan in Los Angeles, learning how to administer such things as pulmonary function tests and arterial blood gas analysis.

The new respiratory department at Hoag—the first in the area, except for the one at Good Samaritan—began as two square feet of space on a table in central supply, but grew over the next ten years into six separate rooms, with 22 employees and technicians under the control of Doctor Hartley and Ms. Linden. And as the department grew, so did Ms. Linden's expertise. "It was a day-to-day learning experience," she says, "like one new thing every day."

Part of her difficulty in dealing with physicians at Hoag, as she grew more experienced and knowledgeable, was, as she puts it, "letting the doctor think he has had an idea you've planted in his brain."

Smiling, she explains, "Physicians have their pride just like everyone else. And that can sometimes get in the way of patient care. It's something you have to deal with if you're a conscientious nurse. What I did in connection with automatically giving people with breathing problems oxygen, for example, was get hold of an article, by an English physician, on the dangers of putting such patients in an oxygen tent as a matter of course. You see, today we know that such a procedure can kill patients, because they retain their carbon dioxide and can't get rid of it.

"So when a physician ordered one of the eight tents we had at Hoag, I'd bring the tent *and* the article up to him and ask very sweetly, 'Doctor, would you mind reading this article I just came across the other day?' And generally he'd look it over and say something like, 'Oh, my goodness, we better not put this patient in the tent.' "

Within a year, most of the 170 physicians at Hoag had seen the article, which by this time had become a bit dog-eared. So near the end of that time, many of the physicians she approached with her soft-sell methods merely said, "You don't want to put this person in the tent, do you, Barbara? Well, okay, if that's the way you feel about it."

This approach to gaining the acceptance of the medical community may have something to do with Ms. Linden's outlook on medicine—and perhaps the influence of her husband, a marketing expert, is involved here, too. "Believe me," she says, "medicine is selling just like everything else. It's just that you're selling ideas. In this respect, I've taken a lot of communication courses over the years and they've really paid off."

But even Ms. Linden's soft-sell, or, when necessary, hard-sell did not always win over her medical superiors. "Sometimes, I'd just get tired of fussing and arguing with a physician, so I'd position a machine so he

couldn't see what I was doing, or how I was setting it. He'd then remark how well the patient was doing with the machine set at 10, while all the time I had it on 30."

Another area where she moved out on her own, with Doctor Hartley's approval, was in obtaining arterial blood for blood gas analysis. When the department was new, nurses weren't allowed to do this. Later, though, when a state bill was passed with the help of Doctor Hartley (who appeared in Sacramento on its behalf), both nurses and technicians were given this right—if the procedure was done under the guidance of a physician.

"Some of the doctors who came down to do the arterial sticks hadn't done anything like that in 20 years. So I told Doctor Hartley, I'm getting tired of seeing a doctor jab around, making a patient a nervous, bloody mess. I'm just going to do the sticks myself, whether it's legal or not.' And he just said, 'Go ahead.'"

In other ways, Ms. Linden was also expanding her role so that, in effect, she was actually acting like a nurse practitioner—a term she is ironically not too familiar with. While she was chief of respiratory care at Hoag, she not only did testing, initially, and later supervised it, but she also made regular rounds to see acute patients and those in the intensive care unit to check on respiratory needs; taught nurses and technicians respiratory care, therapy, and testing; did the hiring and firing for the department; made out the department budget; and, in some cases, on the request of a physician, made home visits to patients to check on equipment or home care. Then, too, she responded to the many emergency calls made to her at home—3:00 a.m. calls from physicians, asking her to come to the hospital on a particularly critical case.

Outside the hospital, of course, there were still her husband and four daughters to consider. One of the girls was making sounds that indicated an interest in nursing, which captured Ms. Linden's attention. And there was her youngest, Suzy, who was still a toddler when the respiratory care department first opened. Still, this veritable dynamo in white—who describes herself as "impossibly gung ho"—found time for it all. Moreover, she somehow found a few more spare hours to teach local lifeguards cardiopulmonary resuscitation; lecture on respiratory care to upcoming registered nurses at Golden West College; and, a bit later, act as a consultant for two producers of educational materials in her field.

Unfortunately, as the respiratory department grew at Hoag, so did the difficulties Ms. Linden and Doctor Hartley encountered. Both felt that the administrative duties were taking them away from their prime concern—patient care. "When our department was small, we were left alone to do our own thing," she remarks. "But as we grew, we were

forced into becoming involved in things that didn't really concern us, like showing up at meetings to discuss whether or not a section of the parking lot should be paved."

Commenting on Doctor Hartley's position, she adds, "Any physician who is on a hospital staff has his time taken up by such nonsensical things. Also, every institution that is large is also political. You have to play politics to get new equipment or whatever you need for your department. Unfortunately, Doctor Hartley isn't either political or a fighter. So that, coupled with new administrative duties, became our problem."

Still, Ms. Linden was quite happy, working ten to 12 hours a day ("I don't work by the clock," she says) and often giving up her weekends for emergencies. She was doing mainly what she wanted to do, which was the important thing for her.

Yet trouble came from another quarter when Doctor Hartley, at the early age of 45, had his first coronary. With the demands of the rapidly expanding department and of the against-his-grain administrative duties, it was difficult for the stricken physician to cut back his work load. Yet, faced with ultimatums from his medical peers and from Ms. Linden, that is just what he was forced to do. When Doctor Hartley began his reduced work schedule, Doctor Amsden came to Hoag to help relieve him of some of his duties. A long-time friend of Doctor Hartley's and an internist of almost 20 years' experience, Doctor Amsden had become interested in pulmonary medicine over the years and had begun to specialize in it. And it was thus that the relationship between the two physicians and the nurse began and flourished into their present collaborative practice.

As Ms. Linden sits reflecting on how it all began, a twinge of concern about Doctor Hartley's present condition suddenly strikes her. Doctor Amsden is expected in the office momentarily, and she wants to be able to give him a reading on their colleague. She checks with the receptionist-secretary, Phyllis DeVore, and is on her way.

Monday, April 7, 11:00 A.M.

Doctor Neal Amsden, a tall, thin man with long, wiry sideburns that stop just short of being muttonchops, moves into his office with the efficiency of movement that indicates he is a busy man. And, indeed, with a private practice in general internal medicine just down the coast in Laguna Beach, his responsibilities at South Laguna Beach's South Coast Community Hospital as chief of staff and head of respiratory therapy, one wonders how he find time for this new consulting practice in pulmonary medicine.

The secret, you soon discover, is not only in the long hours he puts in each day, or in the directness with which he meets each new problem

that arises, but also in his ability to remain outwardly calm and in control—whatever the situation. He eases into his large leather armchair, not with a sense of relief, but with a feeling that he can take advantage of a few monents of quiet reflection.

Yet, as he remembers how this pulmonary practice began, the concern for Doctor Hartley, which was visible earlier on Ms. Linden's face, makes itself felt in subtle ways: The jiggling of a foot as he leans back, the tapping of a pencil on his desk, an anxious look toward Ms. DeVore's desk when the phone rings.

"As to how this office would be run," he begins slowly, "we didn't sit down and work that out beforehand. This just developed from the way we operated in the hospital. Things had gone very smoothly there, and since we were, in a sense, transferring the whole operation to this space —we even brought along our department secretary—we didn't see any need to define our various roles.

"It was assumed that Doctor Hartley and I would provide consultation from referrals. We didn't want to be the primary physician for any of our patients, because of Doctor Hartley's health and my being quite busy outside this office. As at Hoag, we would be giving direction to Barbara on things and giving her the go-ahead on things she brought to our attention. Barbara, of course, was to provide both the technological end of the practice and the more human element—talking to patients, handling them over the phone when we weren't around. So, all in all, it was to be a one-stop facility for pulmonary consultation, testing, and therapy.

"Actually, we'd been thinking of starting the practice for some time—that is, Doctor Hartley and I. But it was really precipitated by Doctor Hartley being eased out of his position at Hoag. When that became imminent, we began making plans in earnest."

Those plans included making Ms. Linden one of the most important factors in the practice. "I guess we just assumed she would be coming with us," Doctor Amsden continues. "So I think we were both surprised by her initial reaction, which was mainly negative. You see, Barbara is a people person—likes to see a lot of them. Also, she liked the hustle and bustle of the hospital, the acuteness of the situation, in terms of the condition of the patients. She was worried about missing that and it took some persuading to convince her she should be part of the team.

"Obviously, she was crucial to what we had in mind. She's just superb —an excellent administrator, gets along with everyone. And, of course, is also an excellent respiratory therapist. Just as important, she knows all the down-to-earth things that need to be done with patients, plus understanding the machines. So about the only thing she had to learn was how to operate different models of testing equipment than those

we had in the hospital.

"Knowledge of the equipment is crucial, also, in terms of home care. Again, that's Barbara's province. For example, if you give someone an IPPB, an intermittent positive pressure breathing machine, for home use, they'd almost have to be an engineer to understand it—how to use it, care for it, and clean it. You have to know how to take it apart and put it back together again, then be able to tell if it's working properly. Also, follow-up visits in the home, which Barbara does, are important to make sure the patient isn't slipping into bad habits when using the equipment."

Getting the practice started was not all that complicated, according to Doctor Amsden. Largely, it was a matter of finding suitable office space, purchasing the appropriate respiratory equipment—done with the help of a consultant—and getting the word out to physicians in the area that the team of Hartley/Amsden/Linden was ready for patients.

"Once the machines were ordered, Barbara more or less decided where they would go in the lab. Also, she made up patient folders, wrote up take-home material to be given to patients, and just in general supervised getting the whole thing together."

Surprisingly, and evidently because of the deep friendship between the two physicians, no formal, legal steps were taken when they set up the practice. Neither attorneys nor other physicians were consulted beforehand. Although the practice is registered with the state, it is a loose partnership, with nothing in writing to set forth the financial structure or the obligations and rights of the two physicians. Both make charges on a fee-for-service basis, splitting the profits from the laboratory/therapy end of the practice on a 50/50 basis. Ms. Linden's charges vary according to what she does with patients and her charges are often higher than those of the two physicians. However, she is paid a regular salary—the same as she was receiving at Hoag before she left.

The protocol in seeing patients also reflects the trust existing between the two men. Nothing was discussed beforehand about how the patient load would be distributed. Unless a person specifically asks for one or the other—or for Ms. Linden, in the event testing or therapy is sought—the decision concerning which physician will see which patient is made by the receptionist/secretary, Ms. DeVore—who admits she tries to match patients with the personalities of the doctors. "Doctor Hartley tends to be more chatty," she explains, "so I try to give him those I feel need special attention or more time. Usually, I can tell that from talking to them when they phone in initially."

In that respect, Doctor Amsden is aware of the expansion of Ms. DeVore's role in comparison with that of the typical receptionist/secretary. "She has her finger on the patients and helps a lot in taking some of the

pressure off us," he explains. "It's the same with Barbara who is doing a lot more than the typical office nurse. In fact, I'd say Barbara combines the talents of a technician with those of a nurse practitioner. Maybe she goes even further than that, because she sometimes makes a diagnosis and acts on it.

"For example, we had a girl come in last week who had previously suffered a pneumothorax. She was supposed to have a pulmonary function test. Well, Barbara took one look at her and knew she was really hurting and sick. So she immediately ordered x-rays, which disclosed that there was a 20 percent collapse of one lung.

"That happened when neither Doctor Hartley or I were here. But at other times, when giving tests while we are here, she'll notice a patient wheezing or discover something from talking to them and come to us and ask us: 'Do you see any contraindication for me doing this, or this, or that?,' and I'll usually say, 'No, that sounds right, go ahead and do it.' So I guess you could also say she's acting like a physician's assistant. She's obviously in one specific field, rather than a large broader one, but that's how she's functioning."

Another phone call comes in and Doctor Amsden looks up expectantly. But he isn't called by Ms. DeVore, who is obviously discussing something with a patient and setting up an appointment.

"You notice how Phyllis is handling that call?," Amsden goes on. "Barbara does the same thing on a much broader scale. And I can't tell you how much it means to me personally. The fact is, I don't like to talk to patients on the phone—it's an unsatisfactory way of doing things, as far as I'm concerned. They immediately go on and on and on about other things than they call about. If they're really sick, I end up wanting to see them; if they're not, I don't want to spend my time talking to them. With Barbara, she can take over the calls, decide if they're really sick, whether they have to be seen immediately, and so forth.

"Another thing in terms of spending time with the patients—which Barbara does in relation to treatment and therapy—is the whole matter of explaining what you are doing medically. I think that's important, but again I don't have the time. So, if I tell a person that I want him to stand on his head for a certain length of time at home each day, he's liable to think 'What?!' But if Barbara explains why this is necessary, you get much better results as far as patients following instructions, because they then know why they're doing it and how important it is."

The time is quickly approaching for Doctor Amsden to leave and see his stricken partner. Ms. Linden has, by now, arrived at Doctor Hartley's side. In the few minutes remaining, the physician reflects on some of the disappointments of the new practice. "We had thought that there would be a much greater demand for the lab and therapy end of the

practice. But in spite of us being the only pulmonary facility of our kind in the area, that part has been rather slow in developing.

"I'm not sure what the reason is for that, although I suspect it has something to do with payment patterns of third parties. Not only are they slow about paying, they tend to refuse to pay for things like pulmonary function tests or home respiratory therapy. Or they knock down the charges. Interestingly enough, in the last respect, when the testing is done in a hospital—even though that hospital may not have the sophisticated machinery we have here—they tend to pay without a question. That, of course, has something to do with the amount of muscle a hospital has with third-party payers, as opposed to that of a private practitioner.

"Another thing, some third-party payers look on respiratory testing as preventive medicine and refuse to cover it out of hand. This really makes wonderful sense! It's like denying the charges for a pap smear on the examination of a woman—which Medicare does—even though it's an accepted medical procedure that can save lives.

"But perhaps there are other reasons why the practice has taken a different turn than we'd envisioned," he continues. "For one thing, it's generally known that I've been very busy and that Doctor Hartley has not been too well. Also, the consulting business is a funny one. You have to be out in the field where you're seen by other physicians if it's really going to be successful. You have to be visible, so they can see you at a hospital, or wherever, and be reminded that you're available. As it is now, a great deal of Barbara's lab and therapy work is generated by us right here in this office. Again, that isn't the way we planned it, it's just that circumstances have brought it about."

Despite some dissatisfaction over the way the practice has developed, Doctor Amsden is optimistic about the future of collaborative medicine between physicians and other medical practitioners working in capacities that extend their traditional roles. "Let's face it," he says, "70 percent of what I do could be done by someone else. So, I think there's a great application or future for such practices. Also, we're being pushed in that direction. We're supposed to be, *quote,* more efficient, *unquote,* all the time.

"At its optimum, then, collaborative medicine can relieve physicians of a lot of things that bug them—for example, talking on the phone, in my case—while still resulting in excellent patient care. In fact, I think I read a study recently of a walk-in clinic that proved that follow-up on patients who saw ancillary medical personnel was much superior to that on patients who saw only a physician. The reason evidently was that the ancillary people spent more time with them and had more identity with what was going on.

"Another aspect is the technical side of medicine. Here it's been shown that nurses in intensive care units have become more proficient at things like arrhythmia, just as Barbara knows more about the operation of our equipment than either Doctor Hartley or myself.

"I also think that collaborative practices might be suitable for such facilities as the Kaiser Group here—a health-maintenance-organization-type service that contracts with certain large groups, like unions, to provide total medical care. This, in spite of my personal view that such practices are mainly more adaptable to specialized areas like ours.

"Of course, such practices are not without problems. Patient acceptance is one. In my general internal practice in Laguna, for example, we sometimes have the nurses taking blood pressure. But some people demand that the doctor do this, even though the charge is less when it's done by a nurse. And even here, we sometimes get people who blow up when they find out they're going to see a nurse. They want to see the doctor. That's very rare, but it does happen.

"The way around that is to let the patient know that there's a free flow of communication between the nurse, or whoever, and the physician. If he knows that what he tells the practitioner will always get back to the doctor, that the two of them are consulting on his condition, he'll be secure and there'll be no problems. In a way we do this in my Laguna office in terms of our receptionist. I've trained her to ask questions, probe, find out as much as she can and get this back to me. Then I make the decision on what should be done. The important thing is, it works. During our last flu epidemic, we were handling 50 calls a day. And, in that time, we saw everyone who really had to be seen, without having the office overflowing.

"Now some might feel that delegating such responsibility to others sets up a physician for legal troubles. After all, you are responsible for those working for you. But as far as I've been able to discover, malpractice suits are mainly caused by a breakdown in physician-patient communication. So I don't know whether I agree that involving other practitioners in one's practice can make one more vulnerable to such litigation."

Just as Doctor Amsden is optimistic about the future of practices such as that of Hartley/Amsden/Linden, he also feels theirs could be duplicated almost anywhere. The key, however, as he explains, is the specific practitioner who is working with the physicians. "Through working so long with Barbara, we, of course, knew what her capabilities were. If, on the other hand, a physician didn't have a Barbara, it might be difficult to get a practice such as ours started. The training period for a practitioner without adequate experience would be a big unknown factor. The length of time it would take would depend on the intensity

of the training, the work load of the doctor, the receptiveness of the nurse, and so on.

"If you were interested in just having someone do pulmonary function tests, it should take about two to three weeks of training. As far as other aspects go—therapy, home care, and so forth, I'd figure on four to six months, depending on who you started with. If you began with a respiratory therapist, then you'd have to give that kind of person input on clinical manifestations. If you started with a nurse, you'd have to train her in specialized therapy. But all in all, I don't think there is anything to a practitioner's duties in a practice such as ours that a willing and reasonably intelligent person couldn't grasp in a relatively short time."

Monday, April 7, 12:30 P.M.

The sunlight has faded outside and a slow drizzle falls from a suddenly gray sky. The offices are especially quiet now, and empty, except for Phyllis DeVore, who continues working on the patient ledgers, ready to answer any incoming phone calls. Doctor Amsden has joined Ms. Linden at the hospital, and Ms. DeVore anxiously awaits the return of her nurse co-worker with some word on Doctor Hartley.

As she answers the phone ("Doctors Hartley and Amsden's Pulmonary Laboratory"), reassuring patients and making appointments, it seems as if she has been with the practice from the start—rather than the nine months she has actually been there. Already she seems to know all about the patients and, without referring to their charts, to be aware of their medical conditions and problems.

Perhaps the reason for her apparent professionalism and obvious patient concern is that she was the widow of a physician, who had worked with her husband for some years in his eye, ear, nose, and throat practice. But if you query her on her background, you'll also learn that after her children had grown she returned to school to pick up specialized quasi-medical courses at a community college. Then, armed with that training she began working in the radiology department of nearby Coast Community Hospital. From there, at the invitation of Doctor Amsden, she joined the practice when her predecessor moved out of the area.

"You know," she says, pausing in her work, "it's really a privilege working with these three people. I go home some nights wondering how I was lucky enough to get this position. And it isn't only me that feels this way. One patient said to me, 'How much do you pay them to work here?' "

Concerning just what her job consists of, she continues, "I do everything that Barbara doesn't do, as far as running the office goes. I handle the insurance forms, the medical transcribing, billing. Also, I take the

patients in to Barbara or to the doctors and get them ready for examinations, talk to the patients over the phone, and greet them when they come in.

Ms. DeVore's greeting is in direct contrast to that of many physicians' receptionists. No sliding glass window isolates her from the patients as they arrive. So they do not have to tap on glass to get her attention, as in other offices—and, perhaps, be given a form to fill out while they wait. When Ms. DeVore hears patients enter, she immediately goes out to the waiting room in front of her office. No one told her to follow this procedure. She merely developed it herself after feeling the personalized-care atmosphere of the practice.

"I sort of just go out and greet them, talk to them about this or that if they're regular patients, perhaps try to put them at ease if it's a first visit. Another thing I do with new patients is go over the financial arrangements and charges with them. I explain that we'll help with insurance forms, or, if there is no insurance or Medicare, how they can make monthly payments to suit their budgets. You know, Orange County is a pretty wealthy area, but not all our patients are that rich.

"Which reminds me about how the doctors handle charges. Absolutely no pressure of any kind is put on the patients for payment. They refuse to turn over delinquent accounts to collectors—won't hear of it. If they can't collect, they just write it off. And last Christmas, Doctor Hartley asked me to bring him the books, went over the outstanding bills, and pulled out four that were owed by people who were having problems. With those, he wrote a little note telling them that the bill had been reduced by half, as a Christmas present."

Another aspect of what Ms. DeVore calls the "personalized-care" approach of the two physicians and the nurse is that she and the patients are all on a first-name basis. "I think it makes them happier, closer to Barbara being called Henry or Betty rather than Mr. or Mrs. Somebody. I'm on that basis, too, with some of them, although I try to keep this on a more professional level—since my function, involving payment and so forth, is different from Barbara's."

Whatever Ms. DeVore's function, however, she certainly shows no lack of commitment to the practice. Often she arrives at 6:30 a.m. to get book work out of the way early so that she can spend more time talking to patients on the phone or when they come in. "Sometimes, they just want to talk when they call. They're lonely, or worried, or have some personal problems. So I just do that, talk to them as much as they want. Then, if I think that Barbara or the doctors should also talk to them, I ask them to hold while I put them through. All in all, the way we're set up and working seems to be very good for the patients," she concludes. "I think that's because we're a good team . . . no, more than that . . . more

like a family."

A call from a patient returns her to her duties.

"Oh, hello, Josephine, this is Phyllis . . . What's the trouble? . . . the left arm? . . . the upper or lower part? . . . feels like a squeezing in the chest? . . . well, listen, Josephine, let me have Barbara call you when she gets back . . . yes . . . well, most of the time these things are just shadows . . . but let me call your doctor and see if he wants Doctor Hartley to do a workup on you . . . all right . . . I'll call you right back . . . bye-bye."

Monday, April 7, 2:00 P.M.

Helen Keener is unaware of Doctor Hartley's condition as she awaits Ms. Linden's return. An attractive, 68-year-old woman with her upswept hair fastened with a tie of orange wool, she exudes a quality of spunk and good humor. Formerly a professor of physiology and dean of women at the University of California at Santa Barbara, she has been coming to the practice for over a year. She describes the first time she came into the office.

"That was a great day. I'd just come out of the hospital at La Jolla. I'd gotten in touch with a friend who recommended Doctor Hartley, but I put off seeing him because I was busy. When my condition got worse, I called in on a Tuesday, making an appointment for that Thursday. On Wednesday I was feeling so bad that I called in and said I thought I needed help immediately. And Phyllis said—right away!—'Yes, you do need help.' That was the beginning—'Yes, you do need help!'

"So I dragged myself in that afternoon. I was walking stooped and was in plain hell. I didn't care what happened. I was prepared for the hospital and then the cemetery. But the minute I came in, Barbara came right out and sat in the reception room with me and started this pursed-breathing—because I was overventilating like mad. She didn't say a thing. But I started copying her. And, you know, when I looked over at Phyllis, she was doing the same thing—the pursed-breathing.

"Another thing that struck me: The second I walked in the door, Phyllis said, 'Oh, Mrs. Keener," as if I was expected. That hit me because most receptionists couldn't care less when you come in. They barely even look up from their desks. And you know, I've been treated that way here ever since."

Mrs. Keener, who suffers from acute bronchial spasms, which came on very suddenly a few years back, had perviously been treated in three hospitals and three emergency rooms. At one time, she had been a patient at Scripps Memorial Hospital for about a month .

Comparing past treatment with that received at the practice, she says, "I'd been through hospital after hospital with one sort of person after

another listening to me. But nobody gave me a sense of caring or knowing. But when I first saw Barbara I immediately felt she'd been through everything that I'd been through—and maybe a little bit more.

"On that first day, after getting me to where I could breathe, she took my history and found out what medications I was taking—that was a fantastically long list of medicines that were just not working. She did nothing to change the medication, but reduced it and made it more simple. Also, she put me on three quarts of water a day. Then she took a blood gas test and, after getting the results, told me if it had been a little worse I'd have been in the hospital. I went home with this new pursed-breathing rhythm—which was God to me for the next 24 hours until I saw Doctor Hartley. You see, I had something to do, something to relieve my condition, that was really working.

"Most important, I felt this tremendous sense of relief. Because I no longer felt my condition was *my* problem. Somehow that had changed. It was now *their* problem!"

Since that time Mrs. Keener sees Doctor Hartley "as often as I can get a good excuse." She goes on: "He does so much for me as a person. I leave feeling I have some importance. And I'm not spoiled by his time and attention. It's just that he gives me a sense of self-confidence, assurance that I can handle myself . . . that my brain is involved. Yes, that's very important . . . he's sympathetic to know how my brain works —even though it screwballs at times.

"So you might say that, psychologically speaking, he's my master. I've hunted psychological help for perhaps 20 years. And he, without being a psychological practitioner, knows people, knew me even before I came in—I guess from what Barbara told him. Our first visit he said, 'No question about it: You need help.' After about our third visit, I said, 'What a lot of bilge I've been spitting out.' He just smiled and answered, 'Not at all, you had to talk.' And many times since those first visits we just talk golf or gourmet dining, or whatever, before we get down to business. In fact, I've told him things I've never told any other doctor.

"Another thing: He lets me in on as much medicine relative to my condition and treatment as I can handle. I have a physiology background, so that helps. He's very patient about explaining what's going on. He calls it teaching. Medically, I'd say he's very conservative, very consistent, and very satisfying. He's . . . simplifying."

Moving to her reaction to Ms. Linden, she continues. "She gives me a tremendous sense of physical energy . . . that life is terribly worthwhile and important . . . that every little thing we do is noted and has a purpose. I think about this quite often. Also, there's her complete empathy with people, plus the tremendous rapport, support, under-

standing—whatever you want to call it—in connection with Doctor Hartley. This she gave me the first day. It was quite a revelation.

"I have complete confidence in her judgment. This she gives me even over the phone. I sometimes call in for minor little questions. But those little questions might be terribly important. For example, I was doing something very stupid—using the medihaler in between using my IPPB machine. I just hadn't clicked on the fact that I was getting evanescence from that, as I was from the machine, and was overdosing myself magnificently. Another time I asked her if *spitting* was so darned important in connection with my therapy. I was just sick to death of it. Well, she told me it was and why. And when I heard that, I just resigned myself to it."

The list of things Mrs. Keener likes about the practice is a long one. She mentions also the availability of Doctor Hartley and Ms. Linden on a 24-hour basis—she has both their home phone numbers; the quiet atmosphere of the office in which she's never felt any sense of hecticness, regardless of how many phone calls come flooding in; the cleanliness and spotlessness of the laboratory, which she feels reflects the nurse's pride in her working space; and the fact that she would feel free to call Ms. Linden—and feel confident in her care—if anything happened to Doctor Hartley. Last year, she sent a Christmas card to the physician and the nurse to which she appended a list of things she liked about the practice. Again, it was a long one, but it included such things as "dedication, carefulness, caring, knowledgeable, never nonplussed, and to-the-point."

As Mrs. Keener reflects, trying to come up with other comments on what is to her an obviously favorite subject, Ms. Linden returns. Before leaving to greet the nurse, the patient-fan sums up her feelings.

"Maybe the most important thing is the psychological benefits they provide. I take these three people—Doctor Hartley, Barbara, and Phyllis home with me in my pocket when I leave after a visit. The whole thing is so inspiring you sort of gain confidence in humanity. That's the way it's been from the beginning, and it's been one big family ever since."

Monday, April 7, 3:00 P.M.

Ms. Linden is trying to smile, but her eyes are red from crying. She has read Doctor Hartley's electrocardiogram. Doctor Amsden has seen Doctor Hartley, who is in South Coast Hospital. His condition is very serious, the nurse tells Ms. DeVore.

"I'm scared stiff . . . so it Doctor Amsden. Doctor Hartley, too. We all are. Doctors and nurses get terrified just like anyone else in a situation like this."

As she calms herself, she remembers her first reaction to joining the two physician-associates in the new practice. As Doctor Amsden had noted, the idea did not immediately appeal to her.

"Let's face it," she says with the trace of a smile. "I'm a big girl, but I'm hyperthyroid and I *love* to work. So I was panicked that I wouldn't be busy enough. I didn't exactly see my place in the practice and thought, no way am I going to be typing up reports!

"Then, too, another hospital had asked me to work in their respiratory department—I'd gone so far as to go in for an interview. But when I expressed some doubts later to Doctor Hartley, told him I'd thought it over and was still unsure, he was really surprised. 'You mean you're not coming with us?,' he asked. So then he explained that the practice—that is, I—would be doing pulmonary function tests, setting up patients on home care, doing respiratory therapy, and, more or less, acting as the first line of patient contact. And then my ears really pricked up."

Other than those broad outlines of her duties, neither Doctor Hartley nor Doctor Amsden detailed her role in more specific terms. So what has developed, in terms of what she does, has been through patient interaction and through her own initiative, with the physicians' tacit approval.

At first, Ms. Linden felt anxious about patient acceptance and what she saw could be her new responsibilities. "If a patient called me on some side effects from medication, I'd change the medication," she explains. "Of course, I was very gingerly about doing this—*un-cocky* might be a good word to desribe how I felt—in fact, how I still feel. You see, I feel *I'm* giving the patients something in terms of medical care. That's a big turn-around for a nurse who's been in the profession for 27 years, not used to doing this. So I catch myself being anxious about doing some things."

Among the other things she now does in the practice, she lists keeping up with what's happening in pulmonary medicine, attending critical care seminars and lectures, allaying patient fears, doing pulmonary function arterial blood gas tests and other tests, instructing on care of the equipment patients use at home, making home visits, instructing and explaining about treatment and therapy, handling patients when the physicians aren't available, and keeping tabs on patients in the practice.

With respect to that last duty, she notes that patients often "get lost" if one does not keep in touch. So she merely calls those not seen recently, saying: "I'm sorry to bother you, but I just wondered how you are doing."

As for home visits, she provides an example of how they can be beneficial. "We had this patient who suffers from Alpha 1, antitrypsin deficiency—a condition that's just recently been discovered. It causes all

kinds of respiratory problems and makes those suffering from it very susceptible to respiratory infections. Well, this woman kept getting one infection after another, and we couldn't figure out why. So I went to her home and discovered that she had one of those little rubber aerators on her kitchen sink faucet. Just on the odd chance, I took this aerator back to the lab with me and did a culture on it. Wow! It was swarming with bacteria. So we took it off the faucet and put her on bottled water and she's been better ever since."

Although she did similar things at Hoag Memorial and does not really see her role as much different than it was when she was chief of respiratory therapy at the hospital, there are some things she no longer does, such as seeing critical patients, keeping records, budgeting, handling a large number of employees, and "attending meeting after meeting." The hospital offered "a bigger playpen to work in," but she does not see either her former or present position as being more rewarding—just different.

Now, for example, she has more time to talk to patients—over the phone, during testing, or on home visits. And this, alone, can ultimately mean better medical care for patients, since Ms. Linden often discovers significant facts when talking to them casually.

"I think I talk to them differently than the physicians," she explains. They are interested in their bodies and medical history. I ask specific things like 'How far do you walk before you get short of breath?,' or 'What were you doing last year that you can no longer do? or I just gab about nothing in particular and still sometimes find out things like an aunt had asthma or something significant to get back to the doctors with."

Ms. Linden, who describes her approach to patients as one of "friendliness and humor," says she, like Ms. DeVore, believes the first-name basis she is on with them is an important reason for success in dealing with them. "All that Mrs. Linden stuff is right out the window, as far as I'm concerned. Somehow their calling me Barbara aids in gaining their confidence—which these particular people especially need. A person with a respiratory problem is like someone who has been hit by a big wave and can't get up. It's really terrifying."

Her approach can also pay off in handling obstreperous patients. She cites two examples of these—one an elderly gentleman who wanted no part of her strange-looking machines, the other a skeptical physician who, when she prepared to give him an arterial stick, said, "You're not pushing that needle into me!" The old man, a former big league pitcher, was mollified by first talking about his days of hurling against such baseball greats as Babe Ruth. The doctor, who did not even realize when she eased the needle into him, is now one of her biggest boosters and

often refers his own patients to her.

Aside from the anxiety precipitated by Doctor Hartley's sudden attack, Ms. Linden sees the chief dangers to the practice in terms of it getting so busy it might turn into a "mill." She feels, however, that proper scheduling should prevent this. If not, and if the office ever does become that overflowing, she feels that the addition of a technician might alleviate the condition. So far, although Ms Linden is quite busy most of the time, the practice is far from a mill. This despite the general approval of the medical community.

"Unless I'm the biggest idiot in the world, the reaction of physicians has been overwhelmingly positive," she says. And already the reputation of the two physicians and their tireless nurse has extended far beyond the Los Angeles area. For example, a pulmonary specialist from Oakland, California, called Ms. Linden recently, asking what she contributed to the practice. And when he discovered the scope of her duties and responsibilities he was not only amazed, he tried to lure her away to his own practice!

Ms. Linden was flattered, but not surprised. She feels that the future of nursing lies in such collaborative practices, with nurses taking on new, expanded concerns.

"As nurses are becoming more technologically adept, there seems to be less and less time for dealing personally with patients," she says with disapproval. "But an important part of *medicine* is talking to the patient, explaining his condition. For example, I had prepared a patient for testing one night and when I came back the next day to see how things were going I found it was a regular zoo, with the patient flailing her arms and legs and the nurses trying to hold her down while they got a needle into her. Later, I talked to this woman and discovered that she thought the nurses believed she was dead and were trying to embalm her. Now if someone had just taken time to explain to her what was going on, she wouldn't have been frightened out of her wits.

"That's one of the reasons why, when I was asked to lecture to some nurses recently, I refused to talk on weaning patients from a respiratory machine. Instead I insisted on talking about the psychosociological aspects of nursing—how to deal with the patients' emotional states, the different ethnic backgrounds, and so forth. And afterward, they all came up to me and said things like: 'Thank God, it's about time somebody said those things.'"

It is growing later in the afternoon, and Ms. Linden must leave to meet her daughter, Suzy, at home. Her youngest girl, whom she describes as "neat" and "14 going on 35," has been trying out for the swimming team after school and the mother wants to learn the outcome. She says a few last words to Ms. DeVore, then begins the ride through

rolling, grassy hills and fruit-laden orange groves to her ranch-style home in Mission Viejo.

Monday, April 7, 5:30 P.M.

Suzy Linden, bright as a penny, surrounded by a loping Collie and a proud Persian tomcat, is relating to her mother how she just missed representing her school in the next swimming meet. Her mother listens understandingly, offering reassurance while she works in the kitchen.

Does she have more time for her family now that she is in the practice? And how has it affected her, personally, in other ways? "Oh, she's definitely more relaxed," Suzy says. "She has a lot more free time for us—the family. And I think she likes it much better than the hospital. She seems to feel better when she goes to work and even when she comes home. Once in a while we talk about what she's doing. We're all interested because she loves it so much. And then one of my sisters is a nurse, too. So she's especially interested, if she happens to be here."

Commenting on the growth of the practice, Suzy goes on, "We were all a little worried when she first started. It was, well, kinda slow. But now it's gotten better, so everything is just fine."

Most interesting is the way Suzy views her mother's role and duties in the practice. "She runs all the machines, does the blood tests, that kind of stuff. See, she works mainly with the patients, while the doctors work mainly with the medicine. In fact, if you ask me she does just as much as the doctors do—if not more."

Ms. Linden enters, unaware of the compliment just paid her by her daughter. She seems to be listening to an inaudible ringing of her phone. Suzy, meanwhile, wanders to the patio window, looking out at the Lindens' small swimming pool in back, perhaps wondering if she shouldn't get in a few laps of practice before supper. It is suddenly very quiet in the house as Ms. Linden sits down. It will be a long night for her—a crucial one for Doctor Hartley.

Tuesday, April 8, 10:00 A.M.

Although Richard Corcoran, M.D., has been up all night trying to save Doctor Hartley's life, his face betrays no sign of strain. As he stands outside the coronary section of the intensive care unit of South Coast Hospital, he looks surprisingly young for an internist specializing in coronary care. During the night, Doctor Hartley suffered another coronary—his fourth. And, except for rushing home for a shower and change of clothes, the young specialist has not left Doctor Hartley's side.

Down an adjacent corridor, Doctor Amsden walks briskly along and, seeing Doctor Corcoran, waves. Doctor Corcoran shakes his head, then moves into a small conference room where a young woman, Doctor

Hartley's daughter, Kathy, sits, waiting. Her pert, pretty face looks drained.

"It looks pretty bad, doesn't it?," she asks. When the doctor answers with a nod, she leaves.

For the next few minutes, Doctor Corcoran thinks back on what the practice of the man he is trying to save has meant to him. "It has been a very good thing for me—for a number of reasons. First, there are the people involved—all tops. Second, I can't really get good pulmonary function testing here at the hospital. Doctors Hartley and Amsden just have better equipment. Then there's Barbara. Before having her, there wasn't anyone who took such a personal interest in my patients while testing or instructing on home care. For example, with chronic cases, learning how to use respiratory therapy equipment is two-thirds the battle. That's something a physician doesn't have the time or personality to do properly.

"With someone like Barbara, I know I can refer patients to her and know that the pulmonary function testing will be valid and that there will be enough rapport between patient and therapist so that if any benefit is to be gained by home therapy, they'll get it.

"In fact, her work has become a kind of model for the medical community here. Recently, this hospital instituted a home-going respiratory care program based on the kind of work she does.

"You see, the big difference is the way they do things. If I send a patient to a traditional lab, I just get numbers back. Well, that's not the whole job for the patient. And actually you don't get the kind of feedback Barbara gives, even from physicians with knowledge of respiratory care. Doctors shy away from doing small, more personal things—the little details that make the difference in dealing with any chronic disease. That's especially true of respiratory cases, who are often subject to depressions, making the personal relationship with the practitioner crucial.

"The interesting thing," he continues, "is that patients tell me that it's Barbara and Phyllis that they relate to in the practice. Even more, really, than the doctors. So when they have trouble, feel badly, are depressed, or are concerned with a machine working properly, they call the office with the idea of talking to Barbara—not the doctors. Now, I have some pretty sick patients who feel that way and get along very well doing just that."

Doctor Hartley's daughter moves again into the room and sits down. On the verge of tears, she says, "He really loved his work." Again Doctor Corcoran leaves to check on her father's condition.

Tuesday, April 8, 11:30 A.M.

The news of Doctor Hartley's grave condition has not yet reached

Benjamin Wright, M.D., as he sits in the office of his busy, general family practice. He has known all three of the principals of the Hartley/Amsden/Linden team from the time they worked together at Hoag, and he has been referring cases to them since their private practice began.

Doctor Wright is well aware of the term "nurse practitioner" through his teaching duties at the University of California at Irvine, where he trained a practitioner recently. In fact, Doctor Wright is on the verge of bringing a nurse practitioner into his own office to reduce some of the load on himself. The advantages of referring cases to the Hartley/Amsden/Linden practice listed by Doctor Wright are, in many instances, the same as those listed by Doctor Corcoran: An outstanding facility for referring patients for testing or therapy, the availability of excellent pulmonary specialists, and personalized care.

"The office setup makes the whole thing more efficient," he adds. "It's a one-stop operation, unlike a hospital where you're using various ancillary departments. So it provides a much smoother consultation for us.

"Also important is the human element of the practice. Barbara provides this to a great extent—talking to people, that kind of thing. She's a very unusual person, and I'm not sure you'd find many women with the capabilities she has, both medically speaking and personality-wise. She can pull it off better than anyone in the community—being a nurse practitioner—if that's what she is. Actually, she's a therapist, but she takes on a nurse practitioner's responsibilities," he adds after a moment's thought.

Moving on to some of the problems that a collaborative or joint practice might encounter, he lists finding someone qualified enough to turn patient care over to, patient acceptance, and the medicolegal problems of a setup in which a physician delegates his responsibility to others.

"As for patient acceptance in our case," he reflects, "I don't know what to expect. If we do bring in a nurse practitioner, we'll be the only general practice in the area with a practitioner having patient responsibility.

"But perhaps Doctors Hartley and Amsden and Barbara have paved the way for us a bit," he says. "I've heard no complaints from either patients or the medical community. But then, that doesn't surprise me—the three of them have the respect of everyone."

Tuesday, April 8, 1:30 P.M.

Beatrice Linklater, also unaware of the acuteness of her pulmonary physician's medical condition, seems a bit impatient as she waits for Ms. Linden's return. On a call from Doctor Amsden, the nurse raced to South Coast Hospital a few minutes before and Ms. DeVore has not had time to call off the elderly patient's appointment.

Mrs. Linklater explains that she has come in for tests after a recent flare-up of her condition, which she explains as an inability to "get rid of the dead air in my lungs." A patient of Doctor Hartley and Ms. Linden since the practice started, she also knew them at Hoag Hospital, where she received treatment on a Bennett machine.

Perhaps it is because of a long-standing concern for Doctor Hartley's condition that shapes her view of the relationship between him and his nurse in terms of its advantages to the physician. Or perhaps the sudden absence of Ms. Linden and the repressed anxiety of Ms. DeVore over the situation at South Coast Hospital has somehow been transmitted to her.

"One of the good things about the way things are done here," she begins, "is that Barbara relieves the doctor of the medical mechanics, which gives him more free time to do the important things. She's like a dental technician, I suppose.

"Now some people object to being treated by a dental technician, they want the dentist to do everything. But I don't see any objection to it—as long as the dentist, or doctor, in this case, has the final say-so.

"And, of course, they work together very well. Both of them explain about the treatment, what I have to do—that kind of thing. But Barbara also shows me how to use and care for my Bennett machine. I have one at home, now. And she gives me advice on my water content, explains why I have to do things, and sometimes gives me booklets to take home and read.

"So, all in all, I think they're very interested in my particular problem. I think they're doing a lot of research on it, because it's quite uncommon. And another thing, Barbara will come to the home if I ask her. She has in the past, when I was having trouble with my Bennett, to show me how to use it propertly. Doctor Hartley says I need a great deal of patience using it—something I don't have a great deal of, I'm afraid.

"As for calling in, I generally speak to Barbara. She can usually answer any questions I have so that I don't have to trouble the doctor. If, for some reason, I were unable to get a hold of the doctor in an emergency, why I think I'd just call her. Yes, I think that's what I'd do. . . ."

Tuesday, April 8, 2:05 P.M.

The office phone rings twice before Ms. DeVore can answer it. She talks in hushed tones and bites her lower lip as Mrs. Linklater gets ready to leave. There are tears in her eyes.

"That was Doctor Amsden," Ms. DeVore explains later. She is crying softly. "Barbara got to the hospital just two minutes too late. Doctor Hartley was already gone.

"She told me before she left, 'I just want to tell him that I love him.'"

Ms. DeVore stands up suddenly, as if to walk around, then stops and looks out at the empty waiting room. "It's terrible that she missed him," she says. Then after a moment's pause she adds, "But, you know, I think he realized it, anyway. In fact, I think he knew we all did. That's why it's so terrible . . . it's just like a death in the family."

R.O.

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